



ANNUAL REPORT

YEAR ENDING DECEMBER 31, 2016



A Nasdaq-100 Company



March 22, 2017

Dear DISH Network Shareholder:

Before earning our first DISH Network customer in the spring of 1996, we had already spent 15 years selling large C-band satellite dishes. Since launching DISH Network, our hard work and ability to overcome countless obstacles in the Pay-TV industry are setting us up for the next stage in our journey.

During 2016, we remained committed to sustaining the long-term profitability of our core DBS business. While total combined Pay-TV subscriber counts for DISH and Sling TV declined in the year, we achieved net subscriber additions in the fourth quarter. For the year, revenue was slightly up, as was ARPU, and we were consistently profitable.

We focused on two customer-related goals: promoting profitable, long-term customer relationships and delivering the best customer experience. In the year, we introduced the Flex Pack skinny bundle as a way to give customers more programming choice at a better price point. From a customer perspective, we have worked to improve touchpoints by enhancing the overall service experience and creating apps that allow customers to manage their accounts and track their DISH technician.

At the same time, we grew our now two-year-old Sling TV into the industry standard for live, over-the-top (OTT) Internet television. Our Sling TV team launched its Sling TV Blue multi-stream service for \$25/month, complementing the \$20/month Sling TV Orange single-stream service debuted in 2015. We introduced a beta version of our cloud-based DVR; we expect full deployment of that capability later this year. I'm proud to say that Sling TV offers the most choice and flexibility for customers in the OTT market.

While our day-to-day efforts during 2016 were focused on our Pay-TV business, our future lies in our ability to transform DISH into a connectivity company. Our efforts toward that goal began in earnest in 2008 when we acquired 700 MHz E-Block wireless spectrum licenses. This work continues today.

In the year, we made meaningful progress on this journey. 3GPP, the global wireless standards body, included part of our spectrum portfolio into a second band plan that allows DISH to participate in wireless infrastructure, including handsets and other devices. Additionally, 3GPP approved NarrowBand Internet of Things support for spectrum bands that include DISH spectrum. These developments pave the way for our entry into the coming 5G wireless ecosystem that we expect will serve tens of billions of devices in industry sectors as diverse as healthcare, entertainment, transportation and machine automation.

The transformation we have pursued for many years is the product of hard work, planning, anticipation, and, most of all, patience. Those 15 years of selling C-band dishes enabled us to launch the EchoStar I satellite and ultimately, DISH Network. The subsequent 20 years of growing DISH Network into one of the largest Pay-TV businesses in the United States has provided us with the means to become a connectivity company - a company that will provide customers and businesses with revolutionary products and services.

Thank you for your continued support.

Sincerely,

A handwritten signature in black ink, appearing to be "C. Ergen".

Charles W. Ergen
Chairman and Chief Executive Officer

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**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

Form 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2016

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
FOR THE TRANSITION PERIOD FROM TO .

Commission file number: 0-26176

DISH Network Corporation

(Exact name of registrant as specified in its charter)

Nevada

(State or other jurisdiction of incorporation or organization)

88-0336997

(I.R.S. Employer Identification No.)

9601 South Meridian Boulevard

Englewood, Colorado

(Address of principal executive offices)

80112

(Zip Code)

Registrant's telephone number, including area code: **(303) 723-1000**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Class A common stock, \$0.01 par value	The Nasdaq Stock Market L.L.C.

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒

Accelerated filer ☐

Non-accelerated filer ☐

(Do not check if a smaller reporting company)

Smaller reporting

company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

As of June 30, 2016, the aggregate market value of Class A common stock held by non-affiliates of the registrant was \$11.5 billion based upon the closing price of the Class A common stock as reported on the Nasdaq Global Select Market as of the close of business on the last trading day of the month.

As of February 13, 2017, the registrant's outstanding common stock consisted of 226,918,482 shares of Class A common stock and 238,435,208 shares of Class B common stock, each \$0.01 par value.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents are incorporated into this Form 10-K by reference:

Portions of the registrant's definitive Proxy Statement to be filed in connection with its 2017 Annual Meeting of Shareholders are incorporated by reference in Part III.

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DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

Unless otherwise required by the context, in this report, the words “DISH Network,” the “Company,” “we,” “our” and “us” refer to DISH Network Corporation and its subsidiaries, “EchoStar” refers to EchoStar Corporation and its subsidiaries, and “DISH DBS” refers to DISH DBS Corporation, a wholly-owned, indirect subsidiary of DISH Network, and its subsidiaries.

This Annual Report on Form 10-K contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, including, in particular, statements about our plans, objectives and strategies, growth opportunities in our industries and businesses, our expectations regarding future results, financial condition, liquidity and capital requirements, our estimates regarding the impact of regulatory developments and legal proceedings, and other trends and projections. Forward-looking statements are not historical facts and may be identified by words such as “future,” “anticipate,” “intend,” “plan,” “goal,” “seek,” “believe,” “estimate,” “expect,” “predict,” “will,” “would,” “could,” “can,” “may,” and similar terms. These forward-looking statements are based on information available to us as of the date of this Annual Report on Form 10-K and represent management’s current views and assumptions. Forward-looking statements are not guarantees of future performance, events or results and involve known and unknown risks, uncertainties and other factors, which may be beyond our control. Accordingly, actual performance, events or results could differ materially from those expressed or implied in the forward-looking statements due to a number of factors, including, but not limited to, the following:

Competition and Economic Risks

- As the pay-TV industry has matured and bundled offers combining video, broadband and/or wireless services have become more prevalent and competitive, we face intense and increasing competition from providers of video, broadband and/or wireless services, which may require us to further increase subscriber acquisition and retention spending or accept lower subscriber activations and higher subscriber churn.
- Changing consumer behavior and competition from digital media companies that provide or facilitate the delivery of video content via the Internet may reduce our gross new subscriber activations and may cause our subscribers to purchase fewer services from us or to cancel our services altogether, resulting in less revenue to us.
- Economic weakness and uncertainty may adversely affect our ability to grow or maintain our business.
- Our competitors may be able to leverage their relationships with programmers to reduce their programming costs and offer exclusive content that will place them at a competitive advantage to us.
- Our over-the-top (“OTT”) Sling TV Internet-based services face certain risks, including, among others, significant competition.
- We face increasing competition from other distributors of unique programming services such as foreign language, sports programming, and original content that may limit our ability to maintain subscribers that desire these unique programming services.

Operational and Service Delivery Risks

- If we do not continue improving our operational performance and customer satisfaction, our gross new subscriber activations may decrease and our subscriber churn may increase.
- If our gross new subscriber activations continue to decrease, or if our subscriber churn, subscriber acquisition costs or retention costs increase, our financial performance will be adversely affected.
- Programming expenses are increasing and could adversely affect our future financial condition and results of operations.

- We depend on others to provide the programming that we offer to our subscribers and, if we fail to obtain or lose access to this programming, our gross new subscriber activations may decline and our subscriber churn may increase.
- We may not be able to obtain necessary retransmission consent agreements at acceptable rates, or at all, from local network stations.
- We may be required to make substantial additional investments to maintain competitive programming offerings.
- Any failure or inadequacy of our information technology infrastructure and communications systems, including without limitation those caused by cyber-attacks or other malicious activities, could disrupt or harm our business.
- We currently depend on EchoStar to design, develop and manufacture substantially all of our new DISH branded pay-TV set-top boxes and certain related components, to provide the vast majority of our satellite transponder capacity, to provide digital broadcast operations and other services to us, and to provide streaming delivery technology and infrastructure for our Sling TV services. Our business would be adversely affected if EchoStar ceases to provide these products and services to us and we are unable to obtain suitable replacement products and services from third parties.
- Technology in the pay-TV industry changes rapidly, and our success may depend in part on our timely introduction and implementation of, and effective investment in, new competitive products and services and more advanced equipment, and our failure to do so could cause our products and services to become obsolete and could negatively impact our business.
- We rely on a single vendor or a limited number of vendors to provide certain key products or services to us such as information technology support, billing systems, and security access devices, and the inability of these key vendors to meet our needs could have a material adverse effect on our business.
- Our primary supplier of new set-top boxes, EchoStar, relies on a few suppliers and in some cases a single supplier, for many components of our new set-top boxes, and any reduction or interruption in supplies or significant increase in the price of supplies could have a negative impact on our business.
- Our programming signals are subject to theft, and we are vulnerable to other forms of fraud that could require us to make significant expenditures to remedy.
- We depend on independent third parties to solicit orders for our services that represent a significant percentage of our total gross new subscriber activations.
- We have limited satellite capacity and failures or reduced capacity could adversely affect our DISH branded pay-TV service.
- Our owned and leased satellites are subject to construction, launch, operational and environmental risks that could limit our ability to utilize these satellites.
- We generally do not carry commercial launch or in-orbit insurance on any of the satellites that we use, other than certain satellites leased from third parties, and could face significant impairment charges if any of our owned satellites fail.
- We may have potential conflicts of interest with EchoStar due to our common ownership and management.
- We rely on key personnel and the loss of their services may negatively affect our business.

Acquisition and Capital Structure Risks

- We have made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, we have made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses.
- We face certain risks related to our non-controlling investments in the Northstar Entities and the SNR Entities, which may have a material adverse effect on our business, results of operations and financial condition.
- To the extent that we commercialize our wireless spectrum licenses, we will face certain risks entering and competing in the wireless services industry and operating a wireless services business.
- We may pursue acquisitions and other strategic transactions to complement or expand our business that may not be successful, and we may lose up to the entire value of our investment in these acquisitions and transactions.
- We may need additional capital, which may not be available on acceptable terms or at all, to continue investing in our business and to finance acquisitions and other strategic transactions.
- We have substantial debt outstanding and may incur additional debt.
- The conditional conversion features of our 3 3/8% Convertible Notes due 2026 (the “Convertible Notes due 2026”), if triggered, may adversely affect our financial condition.
- The convertible note hedge and warrant transactions that we entered into in connection with the offering of the Convertible Notes due 2026 may affect the value of the Convertible Notes due 2026 and our Class A common stock.
- We are subject to counterparty risk with respect to the convertible note hedge transactions.
- From time to time a portion of our investment portfolio may be invested in securities that have limited liquidity and may not be immediately accessible to support our financing needs, including investments in public companies that are highly speculative and have experienced and continue to experience volatility.
- It may be difficult for a third party to acquire us, even if doing so may be beneficial to our shareholders, because of our ownership structure.
- We are controlled by one principal stockholder who is also our Chairman and Chief Executive Officer.

Legal and Regulatory Risks

- A ruling in the Do Not Call litigation requiring us to pay substantial civil penalties and/or damages and/or enjoining us, whether acting directly or indirectly through authorized telemarketers or independent third-party retailers, from certain activities could have a material adverse effect on our results of operations, financial condition and cash flow.
- Our business depends on certain intellectual property rights and on not infringing the intellectual property rights of others.
- We are, and may become, party to various lawsuits which, if adversely decided, could have a significant adverse impact on our business, particularly lawsuits regarding intellectual property.
- Our ability to distribute video content via the Internet, including our Sling TV services, involves regulatory risk.
- Changes in the Cable Act of 1992 (“Cable Act”), and/or the rules of the Federal Communications Commission (“FCC”) that implement the Cable Act, may limit our ability to access programming from cable-affiliated programmers at nondiscriminatory rates.

- The injunction against our retransmission of distant networks, which is currently waived, may be reinstated.
- We are subject to significant regulatory oversight, and changes in applicable regulatory requirements, including any adoption or modification of laws or regulations relating to the Internet, could adversely affect our business.
- Our business depends on FCC licenses that can expire or be revoked or modified and applications for FCC licenses that may not be granted.
- We are subject to digital high-definition (“HD”) “carry-one, carry-all” requirements that cause capacity constraints.
- Our business, investor confidence in our financial results and stock price may be adversely affected if our internal controls are not effective.
- We may face other risks described from time to time in periodic and current reports we file with the Securities and Exchange Commission (“SEC”).

Other factors that could cause or contribute to such differences include, but are not limited to, those discussed under the caption “Risk Factors” in Part I, Item 1A in this Annual Report on Form 10-K, those discussed in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” herein and those discussed in other documents we file with the SEC. All cautionary statements made or referred to herein should be read as being applicable to all forward-looking statements wherever they appear. Investors should consider the risks and uncertainties described or referred to herein and should not place undue reliance on any forward-looking statements. The forward-looking statements speak only as of the date made, and we expressly disclaim any obligation to update these forward-looking statements.

PART I

Item 1. BUSINESS

OVERVIEW

DISH Network Corporation was organized in 1995 as a corporation under the laws of the State of Nevada. We started offering the DISH® branded pay-TV service in March 1996 and are the nation's fourth largest pay-TV provider. Our common stock is publicly traded on the Nasdaq Global Select Market under the symbol "DISH." Our principal executive offices are located at 9601 South Meridian Boulevard, Englewood, Colorado 80112 and our telephone number is (303) 723-1000.

DISH Network Corporation is a holding company. Its subsidiaries operate two primary business segments.

Pay-TV and Broadband

We offer pay-TV services under the DISH® brand and the Sling® brand (collectively "Pay-TV" services). The DISH branded pay-TV service consists of, among other things, FCC licenses authorizing us to use direct broadcast satellite ("DBS") and Fixed Satellite Service ("FSS") spectrum, our owned and leased satellites, receiver systems, third-party broadcast operations, customer service facilities, a leased fiber optic network, in-home service and call center operations, and certain other assets utilized in our operations. The Sling branded pay-TV services consist of, among other things, live, linear streaming OTT Internet-based domestic, international and Latino video programming services ("Sling TV"). Prior to 2015, we launched our Sling International video programming service (formerly known as DishWorld), which historically represented a small percentage of our Pay-TV subscribers. In February and June 2015, we launched our Sling domestic and Sling Latino services, respectively. In addition to our original Sling domestic service that could only be streamed on one device at a time (single-stream service), in April 2016, we launched a live beta multi-stream Sling domestic service, which includes, among other things, the ability to stream on up to three devices simultaneously. In June 2016, our multi-stream Sling domestic service transitioned from its introductory beta period and was re-branded as Sling Blue. Meanwhile, we re-branded our original single-stream Sling domestic service as Sling Orange. All Sling branded pay-TV subscribers are included in our Pay-TV subscriber count. As of December 31, 2016, we had 13.671 million Pay-TV subscribers in the United States.

In addition, we market broadband services under the dishNET™ brand, which had 0.580 million subscribers in the United States as of December 31, 2016. Our satellite broadband service utilizes advanced technology and high-powered satellites launched by Hughes Communications, Inc. ("Hughes") and ViaSat, Inc. ("ViaSat") to provide broadband coverage nationwide. This service primarily targets rural residents that are underserved, or unserved, by wireline broadband. In addition to the dishNET branded satellite broadband service, we also offer wireline broadband services under the dishNET brand as a competitive local exchange carrier to consumers in certain areas in 34 states and wireline voice services in certain areas of 14 of those states that are located in the western United States. We primarily bundle our dishNET branded services with our DISH branded pay-TV service.

Wireless

DISH Network Spectrum

We have invested over \$5.0 billion since 2008 to acquire certain wireless spectrum licenses and related assets. These wireless spectrum licenses are subject to certain interim and final build-out requirements. As we consider our options for the commercialization of our wireless spectrum, we may incur significant additional expenses and may have to make significant investments related to, among other things, research and development, wireless testing and wireless network infrastructure, as well as the acquisition of additional wireless spectrum.

Auction 1000. On February 10, 2016, we filed an application with the FCC to potentially participate as a bidder in the forward auction phase of the broadcast incentive auction in the 600 MHz frequency range (“Auction 1000”). The available spectrum in each licensed geographic area in Auction 1000 is generally comprised of certain paired 5x5 spectrum blocks (5 MHz uplink spectrum and 5 MHz downlink spectrum). As a result, a nationwide footprint may be obtained by aggregating a single 5x5 spectrum block in each available licensed geographic area.

Auction 1000 has had multiple stages, with each stage having two phases. With respect to each stage, in the first phase, or reverse auction phase, participating television broadcasters “sell” their rights to use certain broadcast television spectrum in the 600 MHz frequency range to the FCC. Then following the first phase of a stage, in the second phase, or forward auction phase, the FCC will “resell” that spectrum to auction participants. In the event that certain criteria are not met within a particular stage for Auction 1000 to conclude, Auction 1000 then proceeds to a subsequent stage with less available spectrum than the immediately preceding stage and lower spectrum clearing targets.

Before the forward auction phase of Stage 1 of Auction 1000 began, a qualified bidder in the forward auction could make an upfront deposit of up to approximately \$5.4 billion. On July 15, 2016, the FCC announced that a subsidiary of DISH Network and 61 other applicants were qualified to participate in the forward auction. The FCC determined that bidding in Auction 1000 will be “anonymous,” which means that prior to and during the course of the auction, the FCC will not make public any information about a specific applicant’s upfront deposits or its bids. In addition, FCC rules restrict information that applicants may disclose about their participation in Auction 1000.

- *Stage 1:* The reverse auction phase of Stage 1 began on March 29, 2016 and ended on June 29, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 1, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 1 would have had to have exceeded approximately \$88.4 billion. The forward auction phase of Stage 1 included 100 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 1 began on August 16, 2016 and ended on August 30, 2016, but the aggregate bids of approximately \$23.1 billion did not exceed the approximately \$88.4 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 2.
- *Stage 2:* The reverse auction phase of Stage 2 began on September 13, 2016 and ended on October 13, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 2, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 2 would have had to have exceeded approximately \$56.5 billion. The forward auction phase of Stage 2 included 90 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 2 began and ended on October 19, 2016, but the aggregate bids of approximately \$21.5 billion did not exceed the approximately \$56.5 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 3.
- *Stage 3:* The reverse auction phase of Stage 3 began on November 1, 2016 and ended on December 1, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 3, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 3 would have had to have exceeded approximately \$42.3 billion. The forward auction phase of Stage 3 included 80 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 3 began and ended on December 5, 2016, but the aggregate bids of approximately \$19.7 billion did not exceed the approximately \$42.3 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 4.

- Stage 4: The reverse auction phase of Stage 4 began on December 13, 2016 and ended on January 13, 2017. Pursuant to the FCC's procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 4, in order for Auction 1000 to ultimately conclude, the aggregate bids in the forward auction phase of Stage 4 would have to exceed approximately \$12.0 billion. The forward auction phase of Stage 4 includes 70 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters' indicated availability of spectrum in the reverse auction phase. The clock bidding portion of the forward auction phase of Stage 4 began on January 18, 2017 and ended on February 10, 2017. The aggregate bids of approximately \$19.6 billion exceeded the approximately \$12.0 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to the assignment portion of the forward auction phase in which winning bidders in the clock bidding portion have the opportunity to bid for frequency-specific licenses. The assignment portion is scheduled to begin on March 6, 2017, and all assignment rounds are expected to end no later than March 30, 2017. During the assignment portion, the FCC rules restricting information that forward auction applicants may disclose about their participation in Auction 1000 remain in place. As mentioned above, a subsidiary of DISH Network qualified to participate in the forward auction. To the extent that it is the winning bidder for any 600 MHz licenses, we would expect to pay for such licenses from any upfront deposit made with the FCC and/or existing cash and marketable investment securities balances.

See Note 14 "*Commitments and Contingencies — Wireless — DISH Network Spectrum*" in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses

Through our wholly-owned subsidiaries American AWS-3 Wireless II L.L.C. ("American II") and American AWS-3 Wireless III L.L.C. ("American III"), we have made over \$10.0 billion in certain non-controlling investments in Northstar Spectrum, LLC ("Northstar Spectrum"), the parent company of Northstar Wireless, LLC ("Northstar Wireless," and collectively with Northstar Spectrum, the "Northstar Entities"), and in SNR Wireless HoldCo, LLC ("SNR HoldCo"), the parent company of SNR Wireless LicenseCo, LLC ("SNR Wireless," and collectively with SNR HoldCo, the "SNR Entities"), respectively. On October 27, 2015, the FCC granted certain AWS-3 wireless spectrum licenses (the "AWS-3 Licenses") to Northstar Wireless and to SNR Wireless, respectively, which are recorded in "FCC authorizations" on our Consolidated Balance Sheets. Under the applicable accounting guidance in Accounting Standards Codification 810, Consolidation ("ASC 810"), Northstar Spectrum and SNR HoldCo are considered variable interest entities and, based on the characteristics of the structure of these entities and in accordance with the applicable accounting guidance, we have consolidated these entities into our financial statements beginning in the fourth quarter 2014. See Note 2 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

The AWS-3 Licenses are subject to certain interim and final build-out requirements. We may need to make significant additional loans to the Northstar Entities and to the SNR Entities, or they may need to partner with others, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate these AWS-3 Licenses, and comply with regulations applicable to such AWS-3 Licenses. Depending upon the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such loans or partnerships could vary significantly. There can be no assurance that we will be able to obtain a profitable return on our non-controlling investments in the Northstar Entities and the SNR Entities.

See Note 14 "*Commitments and Contingencies — Wireless — DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses*" in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Business Strategy

Our business strategy is to be the best provider of video services in the United States by providing products with the best technology, outstanding customer service, and great value. We promote our Pay-TV services as providing our subscribers with a better “price-to-value” relationship than those available from other subscription television service providers.

- *Products with the Best Technology.* We offer a wide selection of local and national HD programming and are a technology leader in our industry, offering award-winning DVRs (including our Hopper[®] whole-home HD DVR), multiple tuner receivers, 1080p video on demand, and external hard drives. We offer several Sling TV services, including Sling Orange (our single-stream Sling domestic service), Sling Blue (our multi-stream Sling domestic service), Sling International and Sling Latino.
- *Outstanding Customer Service.* We strive to provide outstanding customer service by improving the quality of the initial installation of subscriber equipment, improving the reliability of our equipment, better educating our customers about our products and services, and resolving customer problems promptly and effectively when they arise.
- *Great Value.* We have historically been viewed as the low-cost provider in the pay-TV industry in the U.S. because we seek to offer the lowest everyday prices available to consumers after introductory promotions expire. For example, during the third quarter 2016, we launched our Flex Pack skinny bundle with a core package of programming consisting of more than 50 channels and the choice of one of eight themed add-on channel packs, which include local broadcast networks and kids, national and regional sports and general entertainment programming. Subscribers can also add or remove additional channel packs to best suit their entertainment needs.

Products and Services

DISH branded pay-TV services. We offer a wide selection of video services under the DISH brand, with access to hundreds of channels depending on the level of subscription. Our standard programming packages generally include programming provided by national broadcast networks, local broadcast networks and national and regional cable networks. We also offer programming packages that include regional and specialty sports channels, premium movie channels and Latino and international programming. Our Latino and international programming packages allow subscribers to choose from over 250 channels in 28 languages.

In addition, we offer our DISH branded pay-TV subscribers streaming access through DISH On Demand[®] to thousands of movies and TV shows via their TV or Internet-connected tablets, smartphones and computers.

Our DISH branded pay-TV subscribers also have the ability to use dishanywhere.com and our mobile applications for smartphones and tablets to view authorized content, search program listings and remotely control certain features of their DVRs. Dishanywhere.com and our mobile applications provide access to thousands of movies and television shows.

Sling branded pay-TV services. We market our Sling TV services primarily to consumers who do not subscribe to traditional satellite and cable pay-TV services. Our Sling TV services require an Internet connection and are available on multiple streaming-capable devices including TVs, tablets, computers, game consoles and smart phones. We offer Sling International, Sling Latino and Sling domestic video programming services. In addition to our original Sling domestic service that could only be streamed on one device at a time (single-stream service), in April 2016, we launched a live beta multi-stream Sling domestic service, which includes, among other things, the ability to stream on up to three devices simultaneously. In June 2016, our multi-stream Sling domestic service transitioned from its introductory beta period and was re-branded as Sling Blue and our original single-stream Sling domestic service was re-branded as Sling Orange. All Sling branded pay-TV subscribers are included in our Pay-TV subscriber count.

Technology. Our DISH branded pay-TV subscribers receive programming via equipment that includes a small satellite dish, digital set-top receivers, and remote controls. Our Hopper and Joey[®] whole-home DVR promotes a suite of integrated features and functionality designed to maximize the convenience and ease of watching TV anytime and anywhere. It also has several innovative features that a consumer can use, at his or her option, to watch and record television programming, through their televisions, Internet-connected tablets, smartphones and computers. During the first quarter 2016, we made our next generation Hopper, the Hopper 3, available to customers nationwide. Among other things, the Hopper 3 features 16 tuners, delivers an enhanced 4K Ultra HD experience, and supports up to seven TVs simultaneously. In December 2016, Sling TV launched a cloud DVR beta program available for customers who subscribe to Sling Orange and/or Sling Blue using Roku devices. In January 2017, we launched AirTV Player, a new 4K Android TV-based streaming device, and AirTV Pro Install, a service that offers expertise, installation and setup of over-the-air (“OTA”) antennas.

We rely on EchoStar to design and manufacture substantially all of our new receivers and certain related components. See “Item 1A — Risk Factors.”

Broadband. In addition to our wide selection of pay-TV programming and award-winning technology, we market a satellite broadband service under the dishNET brand. This service utilizes advanced technology and high-powered satellites launched by Hughes and ViaSat to provide broadband coverage nationwide. This service primarily targets rural residents that are underserved, or unserved, by wireline broadband, and provides download speeds of up to 15 megabits of data per second (“Mbps”). We lease the customer premise equipment to subscribers and generally pay Hughes and ViaSat a wholesale rate per subscriber on a monthly basis. Currently, we generally utilize our existing DISH Network distribution channels, including our DISH Network direct sales channels, under similar incentive arrangements as our DISH branded pay-TV business to acquire new broadband subscribers. New satellite launches by Hughes and ViaSat are expected to provide additional capacity in 2017. EchoStar XIX, a Hughes satellite, was launched on December 18, 2016.

In addition to the dishNET branded satellite broadband service, we also offer wireline broadband services under the dishNET brand as a competitive local exchange carrier to consumers in certain areas in 34 states and wireline voice services in certain areas of 14 of those states that are located in the western United States. Our dishNET branded wireline broadband service provides download speeds of up to 40 Mbps.

We primarily bundle our dishNET branded services with our DISH branded pay-TV service, to offer customers a single bill, payment and customer service option, which includes a discount for bundled services. In addition, we market and sell our dishNET branded services on a stand-alone basis.

New Business Opportunities

From time to time we evaluate opportunities for strategic investments or acquisitions that may complement our current services and products, enhance our technical capabilities, improve or sustain our competitive position, or otherwise offer growth opportunities.

Content Delivery

Digital Broadcast Operations Centers. The principal digital broadcast operations facilities that we use are EchoStar’s facilities located in Cheyenne, Wyoming and Gilbert, Arizona. We also use seven regional digital broadcast operations facilities owned and operated by EchoStar that allow us to maximize the use of the spot beam capabilities of certain satellites. Programming content is delivered to these facilities by fiber or satellite and processed, compressed, encrypted and then uplinked to satellites for delivery to consumers. EchoStar provides certain broadcast services to us, including teleport services such as transmission and downlinking, channel origination services, and channel management services pursuant to a broadcast agreement that expires on December 31, 2017. See Note 18 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on our Related Party Transactions with EchoStar.

Satellites. Our DISH branded pay-TV programming is primarily delivered to customers using satellites that operate in the “Ku” band portion of the microwave radio spectrum. The Ku-band is divided into two spectrum segments. The portion of the Ku-band that allows the use of higher power satellites (12.2 to 12.7 GHz over the United States) is known as the Broadcast Satellite Service band, which is also referred to as the DBS band. The portion of the Ku-band that utilizes lower power satellites (11.7 to 12.2 GHz over the United States) is known as the FSS band.

Most of our DISH branded pay-TV programming is currently delivered using DBS satellites. To accommodate more bandwidth-intensive HD programming and other needs, we continue to explore opportunities to expand our satellite capacity through the acquisition of additional spectrum, the launching of more technologically advanced satellites, and the more efficient use of existing spectrum via, among other things, better compression technologies.

We own or lease capacity on 13 satellites in geostationary orbit approximately 22,300 miles above the equator. For further information concerning these satellites and satellite anomalies, please see the table and discussion under “*Satellites*” below.

Conditional Access System. Our conditional access system secures our programming content using encryption so that only authorized customers can access our programming. We use microchips embedded in credit card-sized access cards, called “smart cards,” or security chips in our receiver systems to control access to authorized programming content (“Security Access Devices”).

Our signal encryption has been compromised in the past and may be compromised in the future even though we continue to respond with significant investment in security measures, such as Security Access Device replacement programs and updates in security software, that are intended to make signal theft more difficult. It has been our prior experience that security measures may only be effective for short periods of time or not at all and that we remain susceptible to additional signal theft. We expect that future replacements of our Security Access Devices may be necessary to keep our system secure. We cannot ensure that we will be successful in reducing or controlling theft of our programming content and we may incur additional costs in the future if our system’s security is compromised.

Internet Connection. Our Sling TV services require an Internet connection and are available through multiple streaming-capable devices. Certain of our digital set-top boxes require an internet connection to enable full functionality, including streaming access through DISH On Demand, access to dishanywhere.com and other applications.

Distribution Channels

While we offer receiver systems and programming through direct sales channels, a significant percentage of our gross new subscriber activations are generated through independent third parties such as small satellite retailers, direct marketing groups, local and regional consumer electronics stores, nationwide retailers, and telecommunications companies. In general, we pay these independent third parties a mix of upfront and monthly incentives to solicit orders for our services and provide customer service. In addition, we partner with certain telecommunications companies to bundle DISH branded programming with broadband and/or voice services on a single bill.

Competition

Our business has historically focused on providing pay-TV services. We face substantial competition from established pay-TV providers and broadband service providers and increasing competition from companies providing/facilitating the delivery of video content via the Internet to computers, televisions, and other streaming and mobile devices, including wireless service providers. In recent years, the traditional pay-TV industry has matured, and industry consolidation and convergence has created competitors with greater scale and multiple product/service offerings. These developments, among others, have contributed to intense and increasing competition, and we expect such competition to continue.

Our Pay-TV services continue to face intense competition from traditional satellite television providers, cable companies and large telecommunication companies such as AT&T Inc. (“AT&T”), Comcast Corp. (“Comcast”), Charter Communications, Inc. (“Charter”), Verizon Communications, Inc. (“Verizon”) and others, some of whom have greater financial, marketing and other resources than we do. Some of these companies also have significant investments in companies that provide programming content. In recent years, mergers and acquisitions, joint ventures and alliances among cable television providers, telecommunications companies and others have created, among other things, greater scale and financial leverage for the combined companies and increased the availability of bundled offerings combining video, broadband and/or wireless services. For example, in 2015 AT&T acquired DirecTV, our direct competitor and the largest satellite TV provider in the United States, which has recently launched an OTT service, DirecTV Now, that competes directly with our Sling branded pay-TV services. Furthermore, AT&T’s acquisition of DirecTV, among other things, allows DirecTV access to AT&T’s nationwide platform for wireless mobile video, and the ability to more seamlessly bundle its video services with AT&T’s broadband Internet access and wireless services. In some cases, certain competitors have been able to potentially subsidize the price of video services with the price of other bundled services, particularly broadband services.

We also face increasing competition from content providers and other companies who distribute video directly to consumers over the Internet. These content providers and other companies, as well as traditional satellite television providers, cable companies and large telecommunication companies, are rapidly increasing their Internet-based video offerings. Programming offered over the Internet has become more prevalent and consumers are spending an increasing amount of time accessing video content via the Internet on their mobile devices. In particular, consumers have shown increased interest in viewing certain video programming in any place, at any time and/or on any broadband-connected device they choose. Video content distributed over the Internet includes services with live linear television programming such as DirecTV Now and Sony Vue, single programmer offerings such as HBO GO and CBS All Access, and offerings of large libraries of on-demand content, including in certain cases original content, by companies such as Netflix, Hulu, Apple, Amazon, Google and Verizon.

In addition to the traditional competition we have faced, new technologies have been, and will likely continue to be, developed that further increase the number of companies with whom we compete for video subscribers. For example, we face increasing competition from wireless telecommunications providers who offer mobile video offerings, other telephone companies who are finding ways to deliver video programming services over their wireline facilities or in a bundle with other multichannel video programming distributors (“MVPDs”), including among others, AT&T, and fiber-based networks including Google Fiber.

For further information see “Item 1A — Risk Factors — Competition and Economic Risks — As the pay-TV industry has matured and bundled offers combining video, broadband and/or wireless services have become more prevalent and competitive, we face intense and increasing competition from providers of video, broadband and/or wireless services, which may require us to further increase subscriber acquisition and retention spending or accept lower subscriber activations and higher subscriber churn.” and “Changing consumer behavior and competition from digital media companies that provide or facilitate the delivery of video content via the Internet may reduce our gross new subscriber activations and may cause our subscribers to purchase fewer services from us or to cancel our services altogether, resulting in less revenue to us.”

Acquisition of New Subscribers

We incur significant upfront costs to acquire subscribers, including advertising, independent third-party retailer incentives, equipment, installation services and new customer promotions. Certain customer promotions to acquire new subscribers result in less programming revenue to us over the promotional period. While we attempt to recoup these upfront costs over the lives of their subscriptions, there can be no assurance that we will be successful in achieving that objective. With respect to our DISH branded pay-TV service, we employ business rules such as minimum credit requirements for prospective customers and contractual commitments. We strive to provide outstanding customer service to increase the likelihood of customers keeping their Pay-TV service over longer periods of time. Subscriber acquisition costs for Sling branded pay-TV subscribers are significantly lower than those for DISH branded pay-TV subscribers, and therefore, as Sling branded pay-TV subscriber activations increase, it will have a positive impact on subscriber acquisition costs. Our subscriber acquisition costs may vary significantly from period to period.

Advertising. We use print, radio, television and Internet media, on a local and national basis to motivate potential subscribers to contact DISH Network and Sling TV, visit our websites or contact independent third-party retailers.

Retailer Incentives. In general, we pay independent third-party retailers an upfront incentive for each new DISH branded pay-TV subscriber they bring to DISH Network that results in the activation of qualified programming and generally pay independent third-party retailers small monthly incentives for up to 60 months; provided, among other things: (i) the independent third-party retailer continuously markets, promotes and solicits orders for DISH Network products and services; (ii) the independent third-party retailer continuously provides customer service to our DISH branded pay-TV subscribers; and (iii) the customer continuously subscribes to qualified programming.

Equipment. We incur significant upfront costs to provide our new DISH branded pay-TV subscribers with in-home equipment, including advanced HD and DVR receivers, which most of our new DISH branded pay-TV subscribers lease from us. While we seek to recoup these upfront equipment costs mostly through monthly fees, there can be no assurance that we will be successful in achieving that objective. In addition, upon deactivation of a subscriber we may refurbish and redeploy their equipment which lowers future upfront costs. However, our ability to capitalize on these cost savings may be limited as technological advances and consumer demand for new features may render the returned equipment obsolete.

Installation Services. We incur significant upfront costs to install satellite dishes and receivers in the homes of our new DISH branded pay-TV subscribers.

New Customer Promotions. We often offer our new DISH branded pay-TV subscribers programming at no additional charge and/or promotional pricing during introductory periods. While such promotional activities have an economic cost and reduce our subscriber-related revenue, they are not included in our definitions of subscriber acquisition costs or the Pay-TV SAC metric. We often offer our new Sling branded pay-TV subscribers free trials and/or streaming-capable devices at no additional charge and/or promotional pricing.

Customer Retention

We incur significant costs to retain our existing DISH branded pay-TV customers, mostly by upgrading their equipment to HD and DVR receivers and by providing retention credits. As with our subscriber acquisition costs, our retention upgrade spending includes the cost of equipment and installation services. In certain circumstances, we also offer programming at no additional charge and/or promotional pricing for limited periods for existing customers in exchange for a contractual commitment to receive service for a minimum term. A component of our retention efforts includes the re-installation of equipment for customers who move. Our subscriber retention costs may vary significantly from period to period.

Customer Service

Customer Service Centers. We use both internally-operated and outsourced customer service centers to handle calls and e-mails from prospective and existing customers. We strive to answer customer calls and e-mails promptly and to resolve issues effectively on the first call or e-mail. We also use the Internet and other applications to provide our customers with self-service capabilities.

Installation and Smart Home Service Operations. High-quality installations, upgrades, and Smart Home services and repairs are critical to providing DISH branded pay-TV subscribers with quality customer service. Such services and repairs are performed by both DISH Network employees and a network of independent contractors and includes, among other things, TV mounting, set-up and installation of wireless networks, surround sound systems and home theaters, priority technical support, replacement equipment, cabling and power surge repairs.

Subscriber Management. We presently use, and depend on, software systems for subscriber billing and related functions, including, among others, CSG Systems International, Inc.'s software system used for the DISH branded pay-TV and DishNET branded broadband services.

Relationship with EchoStar

On January 1, 2008, we completed the distribution of our technology and set-top box business and certain infrastructure assets (the “Spin-off”) into a separate publicly-traded company, EchoStar. DISH Network and EchoStar operate as separate publicly-traded companies and, except for the Satellite and Tracking Stock Transaction and Sling TV Holding L.L.C. (“Sling TV Holding”) discussed in Note 18 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K, neither entity has any ownership interest in the other. However, a substantial majority of the voting power of the shares of both DISH Network and EchoStar is owned beneficially by Charles W. Ergen, our Chairman and Chief Executive Officer, and by certain trusts established by Mr. Ergen for the benefit of his family. EchoStar is our primary supplier of digital set-top boxes and digital broadcast operations. In addition, EchoStar provides the vast majority of our satellite transponder capacity, is a key supplier of related services to us, and provides the streaming delivery technology and infrastructure for our Sling TV services. Furthermore, Hughes, a subsidiary of EchoStar, provides us with satellite broadband Internet services on a wholesale basis, which we then distribute under our dishNET™ brand. See “Item 1A. Risk Factors” and Note 18 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Recent Developments. On January 31, 2017, we and our indirect wholly-owned subsidiaries DISH Network L.L.C. (“DNLLC”) and DISH Operating L.L.C. (“DOLLC”), entered into a Share Exchange Agreement (the “Share Exchange Agreement”) with EchoStar, EchoStar Broadcasting Holding Parent L.L.C., an indirect wholly-owned subsidiary of EchoStar (“EB Holdco”), EchoStar Broadcasting Holding Corporation, a direct, wholly-owned subsidiary of EB Holdco (“EB Splitco”), EchoStar Technologies Holding Corporation, a direct wholly-owned subsidiary of EchoStar (“ET Splitco”), and EchoStar Technologies L.L.C., a direct wholly-owned subsidiary of EchoStar (“ETLLC”).

Pursuant to the Share Exchange Agreement, among other things: (i) EchoStar will complete the steps necessary for certain assets and liabilities of the EchoStar technologies and EchoStar broadcasting businesses, consisting primarily of the businesses that design, develop and distribute digital set-top boxes, provide satellite uplinking services and develop and support streaming video technology, as well as certain investments in joint ventures, spectrum licenses, real estate properties and EchoStar’s ten percent non-voting interest in Sling TV Holding (the “Transferred Businesses”), to be transferred to EB Splitco and ET Splitco; and (ii) EchoStar will transfer to us 100% of the equity of EB Splitco and ET Splitco, and in exchange, we will transfer to EchoStar the 6,290,499 shares of preferred tracking stock issued by EchoStar (the “EchoStar Tracking Stock”) and 81.128 shares of preferred tracking stock issued by Hughes Satellite Systems Corporation, a subsidiary of EchoStar (“HSSC”), (the “HSSC Tracking Stock,” and together with the EchoStar Tracking Stock, collectively, the “Tracking Stock”), that track the residential retail satellite broadband business of Hughes Network Systems, LLC, a wholly-owned subsidiary of HSSC (“HNS”) ((i) and (ii) collectively, the “Transaction”). The Transaction has been structured in a manner to be a tax-free exchange for each of us and EchoStar.

The closing of the Transaction is subject to various conditions. The Transaction is expected to be consummated three business days after the satisfaction or waiver of all of the closing conditions to the Transaction (other than conditions that by their nature are to be satisfied at the closing, but subject, among other things, to the satisfaction or waiver of those conditions at such time), but no earlier than February 28, 2017. The Share Exchange Agreement provides for customary termination rights, including the right of either party to terminate the Share Exchange Agreement if the Transaction has not closed by March 31, 2017. In connection with the Share Exchange Agreement, we and EchoStar and certain of their subsidiaries will, at the closing, enter into certain customary agreements covering, among other things, tax matters, employee matters, intellectual property matters and the provision of transitional services. The financial results related to the Share Exchange Agreement are not included in our consolidated financial statements for all periods presented as the closing of the Transaction is subject to various conditions and is not expected to close prior to February 28, 2017. See Note 18 to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

SATELLITES

Pay-TV Satellites. Most of our DISH branded pay-TV programming is currently delivered using DBS satellites. We continue to explore opportunities to expand our available satellite capacity through the use of other available spectrum. Increasing our available spectrum is particularly important as more bandwidth intensive HD programming is produced and to address new video and data applications consumers may desire in the future. We currently utilize 13 satellites in geostationary orbit approximately 22,300 miles above the equator as detailed in the table below.

Satellites	Launch Date	Degree Orbital Location	Estimated Useful Life (Years) / Lease Termination Date
Owned:			
EchoStar XV	July 2010	61.5	15
EchoStar XVIII	June 2016	61.5	15
Leased from EchoStar (1):			
EchoStar VII (2)	February 2002	119	June 2018
EchoStar IX	August 2003	121	Month to month
EchoStar X (2)	February 2006	110	February 2021
EchoStar XI (2)	July 2008	110	September 2021
EchoStar XII (2)	July 2003	61.5	September 2017
EchoStar XIV (2)	March 2010	119	February 2023
EchoStar XVI (3)	November 2012	61.5	January 2018
Nimiq 5	September 2009	72.7	September 2019
QuetzSat-1	September 2011	77	November 2021
Leased from Other Third Party:			
Anik F3	April 2007	118.7	April 2022
Ciel II	December 2008	129	January 2019

- (1) See Note 18 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on our Related Party Transactions with EchoStar.
- (2) We generally have the option to renew each lease on a year-to-year basis through the end of the useful life of the respective satellite.
- (3) We have the option to renew this lease for an additional five-year period. If we exercise our five-year renewal option, we have the option to renew this lease for an additional five years.

Satellite Anomalies

Operation of our DISH branded pay-TV service requires that we have adequate satellite transmission capacity for the programming that we offer. While we generally have had in-orbit satellite capacity sufficient to transmit our existing channels and some backup capacity to recover the transmission of certain critical programming, our backup capacity is limited.

In the event of a failure or loss of any of our owned or leased satellites, we may need to acquire or lease additional satellite capacity or relocate one of our other owned or leased satellites and use it as a replacement for the failed or lost satellite. Such a failure could result in a prolonged loss of critical programming or a significant delay in our plans to expand programming as necessary to remain competitive and thus may have a material adverse effect on our business, financial condition and results of operations.

In the past, certain of our owned and leased satellites have experienced anomalies, some of which have had a significant adverse impact on their remaining useful life and/or commercial operation. There can be no assurance that future anomalies will not impact the remaining useful life and/or commercial operation of any of the owned and leased satellites in our fleet. See “Impairment of Long-Lived Assets” in Note 2 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on evaluation of impairment. There can be no assurance that we can recover critical transmission capacity in the event one or more of our owned or leased in-orbit satellites were to fail. We generally do not carry commercial launch or in-orbit insurance on any of the satellites that we use, other than certain satellites leased from third parties, and therefore, we will bear the risk associated with any uninsured launch or in-orbit satellite failures. In light of current favorable market conditions, in January 2016, we procured commercial launch and in-orbit insurance (for a period of one year following launch) for the EchoStar XVIII satellite, which was launched on June 18, 2016.

AWS-4 Satellites. We own two in-orbit AWS-4 satellites (D1 and T1), as detailed in the table below.

Satellites	Launch Date	Degree Orbital Location	Estimated Useful Life (Years)
Owned:			
T1	July 2009	111.1	15
D1	April 2008	92.85	N/A

See Note 8 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on our satellites.

GOVERNMENT REGULATIONS

Our operations, particularly our pay-TV and broadband operations, and our wireless spectrum licenses are subject to significant government regulation and oversight, primarily by the FCC and, to a certain extent, by Congress, other federal agencies and foreign, state and local authorities. Depending upon the circumstances, noncompliance with legislation or regulations promulgated by these authorities could result in limitations on, or the suspension or revocation of, our licenses or registrations, the termination or loss of contracts or the imposition of contractual damages, civil fines or criminal penalties, any of which could have a material adverse effect on our business, financial condition and results of operations. These governmental authorities could also adopt regulations or take other actions that would adversely affect our business prospects.

Furthermore, the recent change in the Administration and any government policy changes it may institute, which may be substantial, could increase regulatory uncertainty. The adoption or modification of laws or regulations relating to video programming, satellite services, wireless telecommunications, broadband, the Internet or other areas of our business could limit or otherwise adversely affect the manner in which we currently conduct our business. In addition, the manner in which regulations or legislation in these areas, including the FCC’s Open Internet rules, may be interpreted and enforced cannot be precisely determined, which in turn could have an adverse effect on our business, financial condition and results of operations.

Wireless services and our wireless spectrum licenses are subject to regulation by the FCC and, depending on the jurisdiction, other federal, state and local, as well as international, governmental authorities and regulatory agencies, including, among other things, regulations governing the licensing, construction, operation, sale and interconnection arrangements of wireless telecommunications systems. In particular, the FCC imposes significant regulation on licensees of wireless spectrum with respect to how radio spectrum is used by licensees, the nature of the services that licensees may offer and how the services may be offered, and resolution of issues of interference between spectrum bands. The FCC grants wireless licenses for terms of generally 10-12 years that are subject to renewal or revocation. There can be no assurances that our wireless spectrum licenses will be renewed. Failure to comply with FCC build-out requirements in a given license area may result in acceleration of other build-out requirements or in the modification,

cancellation, or non-renewal of licenses. For further information related to our licenses and build-out requirements related to our wireless spectrum licenses see “*Item 1A. Risk Factors — Acquisition and Capital Structure Risks — We have made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, we have made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses.*”

The following summary of regulatory developments and legislation in the United States is not intended to describe all present and proposed government regulation and legislation affecting the video programming distribution, satellite services, wireless telecommunications and broadband industries. Government regulations that are currently the subject of judicial or administrative proceedings, legislative hearings or administrative proposals could change these industries to varying degrees. We cannot predict either the outcome of these proceedings or any potential impact they might have on these industries or on our operations.

FCC Regulations Governing our Pay-TV Operations

FCC Jurisdiction over our DBS Satellite Operations. The Communications Act of 1934, as amended (the “Communications Act”), gives the FCC broad authority to regulate the operations of satellite companies. Specifically, the Communications Act gives the FCC regulatory jurisdiction over the following areas relating to communications satellite operations:

- the assignment of satellite radio frequencies and orbital locations, the licensing of satellites and earth stations, the granting of related authorizations, and evaluation of the fitness of a company to be a licensee;
- approval for the relocation of satellites to different orbital locations or the replacement of an existing satellite with a new satellite;
- ensuring compliance with the terms and conditions of such assignments, licenses, authorizations and approvals, including required timetables for construction and operation of satellites;
- avoiding interference with other radio frequency emitters; and
- ensuring compliance with other applicable provisions of the Communications Act and FCC rules and regulations.

To obtain FCC satellite licenses and authorizations, satellite operators must satisfy strict legal, technical and financial qualification requirements. Once issued, these licenses and authorizations are subject to a number of conditions including, among other things, satisfaction of ongoing due diligence obligations, construction milestones, and various reporting requirements. Necessary federal approval of these applications may not be granted, may not be granted in a timely manner, or may be granted subject to conditions that may be cumbersome.

Overview of our DBS Satellites, Authorizations and Contractual Rights for Satellite Capacity. Our satellites are located in orbital positions, or slots, that are designated by their western longitude. An orbital position describes both a physical location and an assignment of spectrum in the applicable frequency band. Each DBS orbital position has 500 MHz of available Ku-band spectrum that is divided into 32 frequency channels. Several of our satellites also include spot-beam technology that enables us to increase the number of markets where we provide local channels, but reduces the number of video channels that could otherwise be offered across the entire United States.

The FCC has licensed us to operate a total of 50 DBS frequency channels at the following orbital locations:

- 21 DBS frequency channels at the 119 degree orbital location, capable of providing service to the continental United States (“CONUS”); and
- 29 DBS frequency channels at the 110 degree orbital location, capable of providing service to CONUS.

In addition, we currently lease or have entered into agreements to lease capacity on satellites using the following spectrum at the following orbital locations:

- 500 MHz of Ku-band FSS spectrum that is divided into 32 frequency channels at the 118.7 degree orbital location, which is a Canadian FSS slot that is capable of providing service to CONUS, Alaska and Hawaii;
- 32 DBS frequency channels at the 129 degree orbital location, which is a Canadian DBS slot that is capable of providing service to most of the United States;

- 32 DBS frequency channels at the 61.5 degree orbital location, capable of providing service to most of the United States;
- 24 DBS frequency channels at the 77 degree orbital location, which is a Mexican DBS slot that is capable of providing service to most of the United States and Mexico; and
- 32 DBS frequency channels at the 72.7 degree orbital location, which is a Canadian DBS slot that is capable of providing service to CONUS.

We also have month-to-month FSS capacity available from EchoStar on a satellite located at the 121 degree orbital location and a lease for FSS capacity available from EchoStar on a satellite located at the 103 degree orbital location.

In June 2015, the FCC granted us authority to provide service to the United States from a Canadian-licensed satellite using Reverse Band Ka frequencies at the 103 degree orbital location.

Duration of our DBS Satellite Licenses. Generally speaking, all of our satellite licenses are subject to expiration unless renewed by the FCC. The term of each of our DBS licenses is ten years. Our licenses are currently set to expire at various times. In addition, at various times we have relied on special temporary authorizations for our operations. A special temporary authorization is granted for a period of only 180 days or less, subject again to possible renewal by the FCC. From time to time, we apply for authorizations to use new satellites at our existing orbital locations. Generally, our FCC licenses and special temporary authorizations have been renewed, and our applications for new satellites at our existing orbital locations have been approved, by the FCC on a routine basis, but there can be no assurance that the FCC will continue to do so.

Opposition and Other Risks to our Licenses. Several third parties have opposed in the past, and we expect these or other parties to oppose in the future, some of our FCC satellite authorizations and pending and future requests to the FCC for extensions, modifications, waivers and approvals of our licenses. In addition, we must comply with numerous FCC reporting, filing and other requirements in connection with our satellite authorizations. Consequently, it is possible the FCC could revoke, terminate, condition or decline to extend or renew certain of our authorizations or licenses.

4.5 Degree Spacing “Tweener” Satellites. The FCC has proposed to allow so-called “tweener” DBS operations — DBS satellites operating at orbital locations 4.5 degrees (half of the usual nine degrees) away from other DBS satellites. The FCC granted authorizations to EchoStar and Spectrum Five for twener satellites at the 86.5 and 114.5 degree orbital locations, respectively. These authorizations were subsequently cancelled because the FCC determined that the licensees did not meet certain milestone requirements. Twener operations close to our licensed orbital locations could cause harmful interference to our service and constrain our future operations. The FCC has not completed its rulemaking on the operating and service rules for twener satellites.

Interference from Other Services Sharing Satellite Spectrum. The FCC has adopted rules that allow non-geostationary orbit (“NGSO”) fixed satellite services to operate on a co-primary basis in the same frequency band as DBS and FSS. The FCC has also authorized the use of multichannel video distribution and data service (“MVDDS”) licenses in the DBS band. MVDDS licenses were auctioned in 2004. MVDDS systems are now only beginning to be commercially deployed in a few markets. We have MVDDS licenses in 82 out of 214 geographical license areas. Despite regulatory provisions intended to protect DBS and FSS operations from harmful interference, there can be no assurance that operations by other satellites or terrestrial communication services in the DBS and FSS bands will not interfere with our DBS and FSS operations and adversely affect our business.

OneWeb LLC (“OneWeb”) and others have filed requests with the FCC for authority to launch and operate, or provide service from, NGSO satellite systems using a variety of spectrum bands, including the 12.2-12.7 GHz band, which we use for our DBS service, and where we also have certain licenses to provide one-way terrestrial MVDDS service. If these requests are granted and these systems are launched and put into operation, there can be no assurance that they will not interfere with our DBS operations and adversely affect our business or that they will not hinder our ability to provide MVDDS service.

Satellite Competition from Additional Slots and Interference. AT&T, through DirecTV, has obtained FCC authority to provide service to the United States from a Canadian DBS orbital slot, and EchoStar has obtained authority to provide service to the United States from both a Mexican and a Canadian DBS orbital slot. Further, we have also received authority to do the same from a Canadian DBS orbital slot at 129 degrees and a Canadian FSS orbital slot at 118.7

degrees. The possibility that the FCC will allow service to the U.S. from additional foreign slots may permit additional competition against us from other satellite providers. It may also provide a means by which to increase our available satellite capacity in the United States. In addition, a number of administrations, such as Great Britain and the Netherlands, have requested authority to add orbital locations serving the U.S. close to our licensed slots. Such operations could cause harmful interference to our satellites and constrain our future operations.

Rules Relating to Broadcast Services. The FCC imposes different rules for “subscription” and “broadcast” services. We believe that, because our DISH-branded pay-TV service offers a subscription programming service, we are not subject to many of the regulatory obligations imposed upon broadcast licensees. However, we cannot be certain whether the FCC will find in the future that we must comply with regulatory obligations as a broadcast licensee. If the FCC determines that we are a broadcast licensee, it could require us to comply with all regulatory obligations imposed upon broadcast licensees, which in certain respects are subject to more burdensome regulation than subscription television service providers.

Public Interest Requirements. The FCC imposes certain public interest obligations on our DBS licenses. These obligations require us to set aside four percent of our channel capacity exclusively for noncommercial programming for which we must charge programmers below-cost rates and for which we may not impose additional charges on subscribers. The Satellite Television Extension and Localism Act of 2010 (“STELA”) required the FCC to decrease this set-aside to 3.5 percent for satellite carriers who provide retransmission of state public affairs networks in 15 states and are otherwise qualified. The FCC, however, has not yet determined whether we qualify for this decrease in set-aside. The obligation to provide noncommercial programming may displace programming for which we could earn commercial rates and could adversely affect our financial results. We cannot be sure that, if the FCC were to review our methodology for processing public interest carriage requests, computing the channel capacity we must set aside or determining the rates that we charge public interest programmers, it would find them in compliance with the public interest requirements.

Separate Security, Plug and Play. The STELA Reauthorization Act of 2014 (“STELAR”) ended the “integration ban” that required cable companies to separate security functionality from the other features of their set-top boxes and that required leased cable set-top boxes to include CableCARDs effective December 2015. Set-top boxes used by DBS providers were not subject to this separate security requirement. STELAR required the FCC to establish a working group of technical experts to identify and report on downloadable security design options that are not unduly burdensome and that promote competition with respect to the availability of navigation devices. The working group released a report in August 2015, which declined to offer a consensus recommendation regarding downloadable security design options. However, we cannot predict whether the FCC will take further action regarding downloadable security. Also, the FCC adopted the so-called “plug and play” standard for compatibility between digital television sets and cable systems. That standard was developed through negotiations involving the cable and consumer electronics industries, but not the satellite television industry. The FCC’s adoption of the standard was accompanied by certain rules regarding copy protection measures that were applicable to us. We appealed the FCC’s decision regarding the copy protection measures to the U.S. Court of Appeals for the D.C. Circuit (“D.C. Circuit”) and on January 15, 2013 the D.C. Circuit vacated the FCC’s decision. The FCC is also considering various proposals to establish two-way digital cable “plug and play” rules. That proceeding also asks about means to incorporate all pay-TV providers into its “plug and play” rules. The cable industry and consumer electronics companies have reached a “tru2way” commercial arrangement to resolve many of the outstanding issues in this docket. We cannot predict whether the FCC will impose rules on our DBS operations that are based on cable system architectures or the private cable/consumer electronics tru2way commercial arrangement. Complying with the separate security and other “plug and play” requirements may not be technically feasible or may require potentially costly modifications to our set-top boxes and operations. We cannot predict the timing or outcome of this FCC proceeding.

In 2016, the FCC adopted a notice of proposed rulemaking regarding possible new regulations that would generally require pay-TV providers, among others, to make their video services operate on any third-party device. Under the FCC’s proposal, consumers would have the choice of accessing cable and satellite programming through the pay-TV operator’s products and services, or through products and services offered by a third party. These regulations, if adopted, would have the potential to impose new costs on our DISH branded pay-TV business by, among other things, requiring us to deploy additional hardware or software to enable our DISH branded pay-TV service to operate with third-party devices. In February 2017, the FCC closed this rule making proceeding and no regulations were adopted. However, we cannot be certain that the FCC will not open a new proceeding in the future to pursue similar regulations.

Retransmission Consent. The Copyright Act generally gives satellite companies a statutory copyright license to retransmit local broadcast channels by satellite back into the market from which they originated, subject to obtaining the retransmission consent of local network stations that do not elect “must carry” status, as required by the Communications Act. If we fail to reach retransmission consent agreements with such broadcasters, we cannot carry their signals. This could have an adverse effect on our strategy to compete with cable and other satellite companies that provide local signals. While we have been able to reach retransmission consent agreements with most of these local network stations, from time to time there are stations with which we have not been able to reach an agreement. We cannot be sure that we will secure these agreements or that we will secure new agreements on acceptable terms, or at all, upon the expiration of our current retransmission consent agreements, some of which are short-term. In recent years, national broadcasters have used their ownership of certain local broadcast stations to require us to carry additional cable programming in exchange for retransmission consent of their local broadcast stations. These requirements may place constraints on available capacity on our satellites for other programming. Furthermore, the rates we are charged for retransmitting local channels have been increasing substantially and may exceed our ability to increase our prices to our customers, which could have a material adverse effect on our business, financial condition and results of operations. In addition, the broadcast stations’ demands for higher rates have resulted in more frequent negotiating impasses and programming interruptions. During these programming interruptions, our subscribers in the affected markets lack access to popular programming and may switch to another multichannel distributor that may be able to provide them with such programming.

In 2015, the FCC commenced a rulemaking proceeding as required by STELAR to review its “totality of circumstances” test for ensuring that television stations and MVPDs negotiate retransmission consent agreements in “good faith.” In 2016, the Chairman of the FCC announced that the FCC would not proceed at that time to adopt additional rules governing good faith negotiations for retransmission consent. STELAR prohibits television stations from coordinating or engaging in joint retransmission consent negotiations with any other local television stations, unless the stations are “directly or indirectly under common de jure control,” expanding a previous FCC ruling prohibiting joint negotiations only among the top four stations in a market. In addition, STELAR prohibits a local television station from limiting an MVPD’s ability to carry other television signals that have been deemed by the FCC to be “significantly viewed” or to carry any other television signal the MVPD is otherwise entitled to carry under the Communications Act, unless such stations are “directly or indirectly under common de jure control” pursuant to FCC regulations. We cannot predict if these restrictions on broadcasters will result in more effective retransmission consent negotiations.

ATSC 3.0. In April 2016, the broadcast industry petitioned the FCC to authorize the use of the “Next Generation TV” broadcast television standard, ATSC 3.0. The FCC is expected to commence a rulemaking in the first quarter of 2017 to consider rules authorizing broadcasters to use ATSC 3.0. If the FCC moves forward with enabling the transition to ATSC 3.0, supporting this new standard could, among other things, require us to deploy new equipment and may impact our carriage obligations. We cannot predict whether the FCC will change its rules to enable the use of ATSC 3.0 and the effect that any such changes could have on our equipment costs, carriage obligations, or the retransmission consent process.

Media Ownership Rules. Also in 2016, the broadcast industry petitioned the FCC to relax its media ownership rules, which, among other things, limit the number of commonly owned TV stations per market and restrict newspaper/broadcast cross-ownership and radio/TV cross-ownership. If the FCC were to relax some or all of its media ownership rules, it could increase the negotiating leverage that broadcasters hold in retransmission consent negotiations. We cannot predict whether the FCC will change any of its media ownership rules and the effect that any such changes could have on our future retransmission consent negotiations.

Digital HD Carry-One, Carry-All Requirement. To provide any full-power local broadcast signal in any market, we are required to retransmit all qualifying broadcast signals in that market (“carry-one, carry-all”), including the carriage of full-power broadcasters’ HD signals in markets in which we elect to provide local channels in HD. The carriage of additional HD signals on our DISH branded pay-TV service could cause us to experience significant capacity constraints and prevent us from carrying additional popular national channels and/or carrying those national channels in HD.

Distant Signals. Pursuant to STELA, we obtained a waiver of a court injunction that previously prevented us from retransmitting certain distant network signals under a statutory copyright license. Because of that waiver, we may provide distant network signals to eligible subscribers. To qualify for that waiver, we are required to provide local service in all 210 local markets in the U.S. on an ongoing basis. This condition poses a significant strain on our capacity. Moreover, we may lose that waiver if we are found to have failed to provide local service in any of the 210 local markets. If we lose the waiver, the injunction could be reinstated. Furthermore, depending on the severity of the failure, we may also be subject to other sanctions, which may include, among other things, damages.

Cable Act and Program Access. We purchase a large percentage of our programming from cable-affiliated programmers. Pursuant to the Cable Act, cable providers had been prohibited from entering into exclusive contracts with cable-affiliated programmers. The Cable Act directed that this prohibition expire after a certain period of time unless the FCC determined that the prohibition continued to be necessary. On October 5, 2012, the FCC allowed this prohibition to expire. While the FCC has issued a Further Notice of Proposed Rulemaking aimed at serving some of the same objectives as the prohibition, there can be no assurances that such protections will be adopted or be as effective as the prohibition if they are adopted. In the event that this decision is reconsidered by the FCC or reviewed by a court of appeals, we cannot predict the timing or outcome of any subsequent FCC decision.

As a result of the expiration of this prohibition on exclusivity, we may be limited in our ability to obtain access at all, or on nondiscriminatory terms, to programming from programmers that are affiliated with cable system operators. In addition, any other changes in the Cable Act, and/or the FCC's rules that implement the Cable Act, that currently limit the ability of cable-affiliated programmers to discriminate against competing businesses such as ours, could adversely affect our ability to acquire cable-affiliated programming at all or to acquire programming on nondiscriminatory terms.

Furthermore, the FCC had imposed program access conditions on certain cable companies as a result of mergers, consolidations or affiliations with programmers. The expiration of the exclusivity prohibition in the Cable Act triggered the termination of certain program access conditions that the FCC had imposed on Liberty Media Corporation ("Liberty"). In July 2012, similar program access conditions that had applied to Time Warner Cable Inc. ("Time Warner Cable"), which was acquired by Charter in 2016, expired as previously scheduled. These developments may adversely affect our ability to obtain Liberty's and Charter's programming, or to obtain it on nondiscriminatory terms. In the case of certain types of programming affiliated with Comcast through its control of NBCUniversal Media, LLC ("NBCUniversal"), the prohibition on exclusivity is set to expire in January 2018, and we will not be able to rely on these protections beyond that date. Until that time, we have the right to subject the terms of access to NBCUniversal's programming to binding arbitration if we and the programmer cannot reach agreement on terms, subject to FCC review. There can be no assurance that this procedure will result in favorable terms for us.

In addition, affiliates of certain cable providers have denied us access to sports programming that they supply to their cable systems terrestrially, rather than by satellite. The FCC has held that new denials of such service are unfair if they have the purpose or effect of significantly hindering us from providing programming to consumers. However, we cannot be sure that we can prevail in a complaint related to such programming and gain access to it. Our continuing failure to access such programming could materially and adversely affect our ability to compete in regions serviced by these cable providers.

MDU Exclusivity. The FCC has found that cable companies should not be permitted to have exclusive relationships with multiple dwelling units (e.g., apartment buildings). In May 2009, the D.C. Circuit upheld the FCC's decision. While the FCC requested comments in November 2007 on whether DBS and Private Cable Operators should be prohibited from having similar relationships with multiple dwelling units, it has yet to make a formal decision. If the cable exclusivity ban were to be extended to DBS providers, our ability to serve these types of buildings and communities would be adversely affected. We cannot predict the timing or outcome of the FCC's consideration of this proposal.

Open Internet. In 2015, the FCC imposed Open Internet rules, which apply to both fixed and mobile broadband access providers and prohibit them, among other things, from blocking or throttling traffic, from paid prioritization, and from unreasonably interfering with, or disadvantaging, consumers' or content providers' access to the Internet. In addition, because the FCC reclassified broadband access providers as common carriers, these providers are subject to the general common carrier requirements of reasonableness and nondiscrimination. The rules were affirmed by a panel of the D.C. Circuit. A number of broadband access providers and their associations have filed a petition for an "en banc" hearing by the full D.C. Circuit, and have stated that they intend to pursue the challenge to the United States Supreme Court if rehearing is denied. While this decision provides certain protections from discrimination by broadband access providers against our distribution of video content, including our Sling TV services, via the Internet, it may still permit broadband access providers to provide certain services over their network that are not subject to these requirements. In addition, obligations imposed under the rules on mobile access providers may hinder our ability to provide services using our wireless spectrum licenses.

Comcast-NBCUniversal. In January 2011, the FCC and the Department of Justice approved a transaction between Comcast and General Electric Company ("General Electric"), pursuant to which they joined their programming properties, including NBC, Bravo and many others, in a venture, NBCUniversal, controlled by Comcast. In March 2013, Comcast completed the acquisition of substantially all of General Electric's remaining interest in NBCUniversal. The FCC conditioned its approval on, among other things, Comcast complying with the terms of the FCC's order on network neutrality (even if that order is vacated by judicial or legislative action) and Comcast licensing its affiliated content to us, other traditional pay-TV providers and certain providers of video services over the Internet on fair and nondiscriminatory terms and conditions, including, among others, price. If Comcast does not license its affiliated content to us on fair and nondiscriminatory terms and conditions, we can seek binding arbitration and continue to carry such content while the arbitration is pending. However, it is uncertain how these conditions may be interpreted and enforced by the FCC; therefore, we cannot predict the practical effect of these conditions. In addition, as these conditions expire in January 2018, we will not be able to rely on these protections beyond that date.

Charter/Time Warner Cable. In May 2016, the FCC and the Department of Justice approved a merger transaction between Charter, Time Warner Cable, and Advance/Newhouse Partnership. The FCC conditioned its approval on, among other things, Charter not imposing data caps or usage-based pricing for its residential broadband service and a requirement that Charter provide settlement-free interconnection. These conditions last for seven years, with Charter having the option after four years to petition to shorten the term to five years. It is uncertain how these conditions may be interpreted or enforced by the FCC; therefore, we cannot predict the practical effect of these conditions. In addition, as these conditions are currently set to expire in 2023, we will not be able to rely on these protections beyond that date.

Definition of MVPD. In December 2014, the FCC issued a Notice of Proposed Rulemaking regarding the definition of an MVPD. Among other things, the FCC is considering whether the definition of an MVPD should apply to Internet-based streaming services, thus making such services subject to the same regulations as an MVPD. The FCC is also considering the appropriate treatment of purely Internet-based linear video programming services that cable operators and DBS providers offer in addition to their traditional video services. We cannot predict the timing or outcome of this rulemaking process.

FCC Regulation of Wireless Spectrum

DISH Network Spectrum

700 MHz Licenses. In 2008, we paid \$712 million to acquire certain 700 MHz E Block ("700 MHz") wireless spectrum licenses, which were granted to us by the FCC in February 2009. At the time they were granted, these licenses were subject to certain interim and final build-out requirements. On October 29, 2013, the FCC issued an order approving a voluntary industry solution to resolve certain interoperability issues affecting the lower 700 MHz spectrum band (the "Interoperability Solution Order"), which requires us to reduce power emissions on our 700 MHz licenses. As part of the Interoperability Solution Order, the FCC, among other things, approved our request to modify the original interim and final build-out requirements associated with our 700 MHz licenses so that by March 2017, we must provide signal coverage and offer service to at least 40% of our total E Block population (the "Modified 700 MHz Interim Build-Out Requirement"). The FCC also approved our request to modify the 700 MHz Final Build-Out Requirement so that by March 2021, we must

provide signal coverage and offer service to at least 70% of the population in each of our E Block license areas (the “Modified 700 MHz Final Build-Out Requirement”). While the modifications to our 700 MHz licenses provide us additional time to complete the build-out requirements, the reduction in power emissions could have an adverse impact on our ability to fully utilize our 700 MHz licenses. If the Modified 700 MHz Interim Build-Out Requirement is not met, the Modified 700 MHz Final Build-Out Requirement may be accelerated by one year, from March 2021 to March 2020, and we could face the reduction of license area(s). If the Modified 700 MHz Final Build-Out Requirement is not met, our authorization may terminate for the geographic portion of each license in which we are not providing service.

AWS-4 Licenses. On March 2, 2012, the FCC approved the transfer of 40 MHz of wireless spectrum licenses held by DBSD North America, Inc. (“DBSD North America”) and TerreStar Networks, Inc. (“TerreStar”) to us. On March 9, 2012, we completed the acquisition of 100% of the equity of reorganized DBSD North America (the “DBSD Transaction”) and substantially all of the assets of TerreStar (the “TerreStar Transaction”), pursuant to which we acquired, among other things, certain satellite assets and wireless spectrum licenses held by DBSD North America and TerreStar. The total consideration to acquire the DBSD North America and TerreStar assets was approximately \$2.860 billion.

On February 15, 2013, the FCC issued an order, which became effective on March 7, 2013, modifying our licenses to expand our terrestrial operating authority with AWS-4 authority (“AWS-4”). That order also mandated certain interim and final build-out requirements for the licenses. By March 2017, we must provide terrestrial signal coverage and offer terrestrial service to at least 40% of the aggregate population represented by all of the areas covered by the licenses (the “AWS-4 Interim Build-Out Requirement”). By March 2020, we were required to provide terrestrial signal coverage and offer terrestrial service to at least 70% of the population in each area covered by an individual license (the “AWS-4 Final Build-Out Requirement”).

On December 20, 2013, the FCC issued a further order that, among other things, extended the AWS-4 Final Build-Out Requirement by one year to March 2021 (the “Modified AWS-4 Final Build-Out Requirement”). If the AWS-4 Interim Build-Out Requirement is not met, the Modified AWS-4 Final Build-Out Requirement may be accelerated by one year, from March 2021 to March 2020. If the Modified AWS-4 Final Build-Out Requirement is not met, our terrestrial authorization for each license area in which we do not meet the requirement may terminate. The FCC’s December 20, 2013 order also conditionally waived certain FCC rules for our AWS-4 licenses to allow us to repurpose all 20 MHz of our uplink spectrum (2000-2020 MHz) for terrestrial downlink operations. On June 1, 2016, we notified the FCC that we had elected to use our AWS-4 uplink spectrum for terrestrial downlink operations, and effective June 7, 2016, the FCC modified our AWS-4 licenses, resulting in all 40 MHz of our AWS-4 spectrum being designated for terrestrial downlink operations.

H Block Licenses. On April 29, 2014, the FCC issued an order granting our application to acquire all 176 wireless spectrum licenses in the H Block auction. We paid approximately \$1.672 billion to acquire these H Block licenses, including clearance costs associated with the lower H Block spectrum. The H Block licenses are subject to certain interim and final build-out requirements. By April 2018, we must provide reliable signal coverage and offer service to at least 40% of the population in each area covered by an individual H Block license (the “H Block Interim Build-Out Requirement”). By April 2024, we must provide reliable signal coverage and offer service to at least 75% of the population in each area covered by an individual H Block license (the “H Block Final Build-Out Requirement”). If the H Block Interim Build-Out Requirement is not met, the H Block license term and the H Block Final Build-Out Requirement may be accelerated by two years (from April 2024 to April 2022) for each H Block license area in which we do not meet the requirement. If the H Block Final Build-Out Requirement is not met, our authorization for each H Block license area in which we do not meet the requirement may terminate.

MVDDS Licenses. We have MVDDS licenses in 82 out of 214 geographical license areas, including Los Angeles, New York City, Chicago and several other major metropolitan areas. By August 2014, we were required to meet certain FCC build-out requirements related to our MVDDS licenses, and we are subject to certain FCC service rules applicable to these licenses. In January 2015, the FCC granted our application to extend the build-out requirements related to our MVDDS licenses. We now have until 2019 to provide “substantial service” on our MVDDS licenses, and the licenses expire in 2024. Our MVDDS licenses may be terminated, however, if we do not provide substantial service in accordance with the new build-out requirements.

In 2016, the MVDDS 5G Coalition, of which we are a member, filed a petition for rulemaking requesting the FCC to consider updating the rules to allow us to provide two-way 5G services using our MVDDS licenses. We cannot predict when or if the FCC will grant the petition and proceed with a rulemaking. If the FCC adopts rules that would allow us to provide two-way 5G services using our MVDDS licenses, the requests of OneWeb and others for authority to use the band for service from NGSO satellite systems may hinder our ability to provide 5G services using our MVDDS licenses.

DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses

Through our wholly-owned subsidiaries American II and American III, we have made over \$10.0 billion in certain non-controlling investments in Northstar Spectrum, the parent company of Northstar Wireless, and in SNR HoldCo, the parent company of SNR Wireless, respectively. On October 27, 2015, the FCC granted certain AWS-3 Licenses to Northstar Wireless and to SNR Wireless, respectively, which are recorded in “FCC authorizations” on our Consolidated Balance Sheets. The AWS-3 Licenses are subject to certain interim and final build-out requirements. By October 2021, Northstar Wireless and SNR Wireless must provide reliable signal coverage and offer service to at least 40% of the population in each area covered by an individual AWS-3 License (the “AWS-3 Interim Build-Out Requirement”). By October 2027, Northstar Wireless and SNR Wireless must provide reliable signal coverage and offer service to at least 75% of the population in each area covered by an individual AWS-3 License (the “AWS-3 Final Build-Out Requirement”). If the AWS-3 Interim Build-Out Requirement is not met, the AWS-3 License term and the AWS-3 Final Build-Out Requirement may be accelerated by two years (from October 2027 to October 2025) for each AWS-3 License area in which Northstar Wireless and SNR Wireless do not meet the requirement. If the AWS-3 Final Build-Out Requirement is not met, the authorization for each AWS-3 License area in which Northstar Wireless and SNR Wireless do not meet the requirement may terminate.

See “Item 1A. Risk Factors — Acquisition and Capital Structure Risks — We face certain risks related to our non-controlling investments in the Northstar Entities and the SNR Entities, which may have a material adverse effect on our business, results of operations and financial condition” in this Annual Report on Form 10-K for further information.

State and Local Regulation

We are also regulated by state and local authorities. While the FCC has preempted many state and local regulations that impair the installation and use of towers and consumer satellite dishes, our business nonetheless may be subject to state and local regulation, including, among others, zoning regulations that affect the ability to install consumer satellite antennas or build out wireless telecommunications networks.

International Regulation

We are subject to regulation by the International Telecommunication Union (“ITU”) and our satellites must be registered in the United Nations (“UN”) Registry of Space Objects. The orbital location and frequencies for certain of our satellites are subject to the frequency registration and coordination process of the ITU. The ITU Radio Regulations define the international rules, regulations, and rights for a satellite and associated earth stations to use specific radio frequencies at a specific orbital location. These rules, which include deadlines for the bringing of satellite networks into use, differ depending on the type of service to be provided and the frequencies to be used by the satellite. On our behalf, various countries have made and may in the future make additional filings for the frequency assignments at particular orbital locations that are used or to be used by our current satellite networks and potential future satellite networks we may build or acquire.

Our satellite services also must conform to the ITU service plans for Region 2 (which includes the United States). If any of our operations are not consistent with this plan, the ITU will only provide authorization on a non-interference basis pending successful modification of the plan or the agreement of all affected administrations to the non-conforming operations. Certain of our satellites are not presently entitled to any interference protection from other satellites that are in conformance with the plan. Accordingly, unless and until the ITU modifies its service plans to include the technical parameters of our non-conforming operations, our non-conforming satellites, along with those of other non-conforming satellite operators, must not cause harmful electrical interference with other assignments that are in conformance with the ITU service plans.

Registration in the UN Registry of Space Objects

The United States and other jurisdictions in which we license satellites are parties to the UN Convention on the Registration of Objects Launched into Outer Space. The UN Convention requires a satellite's launching state to register the satellite as a space object. The act of registration carries liability for the registering country in the event that the satellite causes third-party damage. Administrations may place certain requirements on satellite licensees in order to procure the necessary launch or operational authorizations that accompany registration of the satellite. In some jurisdictions, these authorizations are separate and distinct, with unique requirements, from the authorization to use a set of frequencies to provide satellite services. There is no guarantee that we will be able to procure such authorizations even if we already possess a frequency authorization.

Export Control Regulation

The delivery of satellites and related technical information for purposes of launch by foreign launch service providers is subject to export control and prior approval requirements. We are required to obtain import and export licenses from the United States government to receive and deliver certain components of direct-to-home satellite television systems. In addition, the delivery of satellites and the supply of certain related ground control equipment, technical services and data, and satellite communication/control services to destinations outside the United States are subject to export control and prior approval requirements from the United States government (including prohibitions on the sharing of certain satellite-related goods and services with China).

PATENTS AND OTHER INTELLECTUAL PROPERTY

Many entities, including some of our competitors, have or may in the future obtain patents and other intellectual property rights that cover or affect products or services that we offer or that we may offer in the future. In general, if a court determines that one or more of our products or services infringe intellectual property rights held by others, we may be required to cease developing or marketing those products or services, to obtain licenses from the holders of the intellectual property rights at a material cost, or to redesign those products or services in such a way as to avoid infringing any patent claims. If those intellectual property rights are held by a competitor, we may be unable to obtain the intellectual property rights at any price, which could adversely affect our competitive position.

We may not be aware of all intellectual property rights that our products or services may potentially infringe. In addition, patent applications in the United States are confidential until the Patent and Trademark Office either publishes the application or issues a patent (whichever arises first) and, accordingly, our products may infringe claims contained in pending patent applications of which we are not aware. Further, the process of determining definitively whether a claim of infringement is valid often involves expensive and protracted litigation, even if we are ultimately successful on the merits.

We cannot estimate the extent to which we may be required in the future to obtain intellectual property licenses or the availability and cost of any such licenses. Those costs, and their impact on our results of operations, could be material. Damages in patent infringement cases can be substantial, and in certain circumstances can be trebled. To the extent that we are required to pay unanticipated royalties to third parties, these increased costs of doing business could negatively affect our liquidity and operating results. We are currently defending multiple patent infringement actions. We cannot be certain the courts will conclude these companies do not own the rights they claim, that our products do not infringe on these rights and/or that these rights are not valid. Further, we cannot be certain that we would be able to obtain licenses from these persons on commercially reasonable terms or, if we were unable to obtain such licenses, that we would be able to redesign our products to avoid infringement.

ENVIRONMENTAL REGULATIONS

We are subject to the requirements of federal, state, local and foreign environmental and occupational safety and health laws and regulations. These include laws regulating air emissions, water discharge and waste management. We attempt to maintain compliance with all such requirements. We do not expect capital or other expenditures for environmental compliance to be material in 2017 or 2018. Environmental requirements are complex, change frequently and have become more stringent over time. Accordingly, we cannot provide assurance that these requirements will not change or become more stringent in the future in a manner that could have a material adverse effect on our business.

SEGMENT REPORTING DATA AND GEOGRAPHIC AREA DATA

For segment reporting data and principal geographic area data for 2016, 2015 and 2014, see Note 15 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K.

EMPLOYEES

We had approximately 16,000 employees at December 31, 2016, most of whom were located in the United States. We generally consider relations with our employees to be good. Approximately 60 employees in two of our field offices have voted to have a union represent them in contract negotiations. While we are not currently a party to any collective bargaining agreements, we are currently negotiating collective bargaining agreements at these offices.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Exchange Act and accordingly file our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements and other information with the SEC. The public may read and copy any materials filed with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Please call the SEC at (800) SEC-0330 for further information on the operation of the Public Reference Room. As an electronic filer, our public filings are also maintained on the SEC's Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that website is <http://www.sec.gov>.

WEBSITE ACCESS

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act also may be accessed free of charge through our website as soon as reasonably practicable after we have electronically filed such material with, or furnished it to, the SEC. The address of that website is <http://www.dish.com>.

We have adopted a written code of ethics that applies to all of our directors, officers and employees, including our principal executive officer and senior financial officers, in accordance with Section 406 of the Sarbanes-Oxley Act of 2002 and the rules of the SEC promulgated thereunder. Our code of ethics is available on our corporate website at <http://www.dish.com>. In the event that we make changes in, or provide waivers of, the provisions of this code of ethics that the SEC requires us to disclose, we intend to disclose these events on our website.

EXECUTIVE OFFICERS OF THE REGISTRANT

(furnished in accordance with Item 401(b) of Regulation S-K, pursuant to General Instruction G(3) of Form 10-K)

The following table and information below sets forth the name, age and position with DISH Network of each of our executive officers, the period during which each executive officer has served as such, and each executive officer's business experience during the past five years:

Name	Age	Position
Charles W. Ergen	63	Chairman, Chief Executive Officer and Director
W. Erik Carlson	47	President and Chief Operating Officer
Thomas A. Cullen	57	Executive Vice President, Corporate Development
James DeFranco	64	Executive Vice President and Director
R. Stanton Dodge	49	Executive Vice President, General Counsel and Secretary
Bernard L. Han	52	Executive Vice President, Strategic Planning
Vivek Khemka	44	Executive Vice President and Chief Technology Officer
Roger J. Lynch	54	Chief Executive Officer, Sling TV Holding L.L.C.
Michael K. McClaskey	53	Executive Vice President and Chief Human Resources Officer
Brian V. Neylon	51	Executive Vice President, Customer Acquisition and Retention
Paul W. Orban	48	Senior Vice President and Chief Accounting Officer
Warren W. Schlichting	55	Executive Vice President, Marketing, Programming, and Media Sales
Steven E. Swain	49	Senior Vice President and Chief Financial Officer
John W. Swieringa	39	Executive Vice President, Operations

Charles W. Ergen. Mr. Ergen is our executive Chairman and Chief Executive Officer and has been Chairman of the Board of Directors of DISH Network since its formation and, during the past five years, has held executive officer and director positions with DISH Network and its subsidiaries. Mr. Ergen also serves as executive Chairman and Chairman of the Board of Directors of EchoStar. Mr. Ergen co-founded DISH Network with his future spouse, Cantey Ergen, and James DeFranco, in 1980.

W. Erik Carlson. Mr. Carlson has served as President and Chief Operating Officer since December 2015 and is responsible for the day-to-day operations of DISH Network including Customer Acquisition and Retention, Operations, Finance and Accounting, Human Resources, Marketing, Media Sales, Information Technologies, Programming, and Product Management. Mr. Carlson previously served as our Executive Vice President, In-Home Service and Manufacturing Operations from February 2008 to December 2015. Mr. Carlson also served as Senior Vice President of Retail Services, a position he held since mid-2006. He joined DISH Network in 1995 and has held operating roles of increasing responsibility over the years.

Thomas A. Cullen. Mr. Cullen has served as Executive Vice President, Corporate Development for DISH Network since July 2011. Mr. Cullen previously served as our Executive Vice President, Sales, Marketing and Programming from April 2009 to July 2011 and as our Executive Vice President, Corporate Development from December 2006 to April 2009. Before joining DISH Network, Mr. Cullen held various executive positions in the telecommunications, cable and wireless industries.

James DeFranco. Mr. DeFranco is one of our Executive Vice Presidents and has been one of our vice presidents and a member of the Board of Directors of DISH Network since our formation. During the past five years he has held various executive officer and director positions with our subsidiaries. Mr. DeFranco co-founded DISH Network with Charles W. Ergen and Cantey Ergen, in 1980.

R. Stanton Dodge. Mr. Dodge has served as Executive Vice President, General Counsel and Secretary since June 2007 and is responsible for all legal, government affairs and corporate communications for DISH Network and its subsidiaries. Mr. Dodge has served on the Board of Directors of EchoStar since March 2009. Mr. Dodge also served as EchoStar's Executive Vice President, General Counsel and Secretary from October 2007 to November 2011 pursuant to a management services agreement between DISH Network and EchoStar. Since joining DISH Network in November 1996, he has held various positions of increasing responsibility in DISH Network's legal department.

Bernard L. Han. Mr. Han has served as Executive Vice President, Strategic Planning for DISH Network since December 2015. Mr. Han previously served as our Executive Vice President and Chief Operating Officer from April 2009 to December 2015. Mr. Han also served as Executive Vice President and Chief Financial Officer of DISH Network from September 2006 to April 2009. Mr. Han also served as EchoStar's Executive Vice President and Chief Financial Officer from January 2008 to June 2010 pursuant to a management services agreement between DISH Network and EchoStar. Before joining DISH Network, Mr. Han served as Executive Vice President and Chief Financial Officer of Northwest Airlines, Inc.

Vivek Khemka. Mr. Khemka has served as Executive Vice President and Chief Technology Officer since December 2015 and is responsible for all development and execution of technology strategy for DISH Network. Since August 2016, Mr. Khemka also serves as the President of EchoStar Technologies L.L.C. pursuant to a professional services agreement between DISH Network and EchoStar. Mr. Khemka previously served as Senior Vice President of Product Management from March 2013 to December 2015. Mr. Khemka also served as Vice President of Customer Technology, a position he held from December 2011 to March 2013. He joined DISH Network in 2009 and has held various roles of increasing responsibility over the years. Before joining DISH Network, Mr. Khemka held various positions at Danaher, Motorola and McKinsey & Co.

Roger J. Lynch. Mr. Lynch has served as Executive Vice President, Advanced Technologies for DISH Network since November 2009. Mr. Lynch also served as EchoStar's Executive Vice President, Advanced Technologies from November 2009 to December 2014. In addition, Mr. Lynch has served as Chief Executive Officer of Sling TV Holding L.L.C. since July 2012. Prior to joining DISH Network, Mr. Lynch served as Chairman and CEO of Video Networks International, Ltd., an Internet protocol television ("IPTV") technology company in the United Kingdom.

Michael K. McClaskey. Mr. McClaskey has served as Executive Vice President and Chief Human Resources Officer since February 2014 and is responsible for the recruiting, benefits administration, compensation, and leadership and organizational development for DISH Network. Mr. McClaskey joined DISH Network in 2007 and previously served as our Senior Vice President and Chief Information Officer until February 2014. Prior to DISH Network, Mr. McClaskey spent 12 years at Perot Systems where he served as Vice President of Infrastructure Solutions and Chief Information Officer.

Brian V. Neylon. Mr. Neylon has served as Executive Vice President, Customer Acquisition and Retention since December 2015 and is responsible for all acquisition and sales operations functions for DISH Network. Mr. Neylon previously served as our Senior Vice President of Sales from June 2011 to December 2015. Since first joining DISH Network in September 1991, he has held various positions of increasing responsibility within various sales and distribution teams from time to time.

Paul W. Orban. Mr. Orban has served as Senior Vice President and Chief Accounting Officer since December 2015 and is responsible for all aspects of our accounting department including external financial reporting, technical accounting policy, income tax accounting and internal controls for DISH Network. Mr. Orban served as our Senior Vice President and Corporate Controller from September 2006 to December 2015 and as our Vice President and Corporate Controller from September 2003 to September 2006. He also served as EchoStar's Senior Vice President and Corporate Controller from 2008 to 2012 pursuant to a management services agreement between DISH Network and EchoStar. Since joining DISH Network in 1996, Mr. Orban has held various positions of increasing responsibility in our accounting department. Prior to DISH Network, Mr. Orban was an auditor with Arthur Andersen LLP.

Warren W. Schlichting. Mr. Schlichting has served as Executive Vice President, Marketing, Programming, and Media Sales for DISH Network since December 2015 and is responsible for the acquisition and renewal of all programming content, marketing for our DISH branded pay-TV business and the advertising sales division. Mr. Schlichting previously served as our Senior Vice President of Programming and Media Sales from October 2014 to December 2015. Mr. Schlichting joined DISH Network in September 2011 as Senior Vice President of Media Sales. Prior to DISH Network, Mr. Schlichting served as Senior Vice President of New Business Development for Comcast from August 2002 to September 2011, leading advanced advertising efforts on multiple media and ad delivery platforms including broadband, interactive television and video-on-demand.

Steven E. Swain. Mr. Swain has served as Senior Vice President and Chief Financial Officer of DISH Network since October 2014. Mr. Swain served as our Senior Vice President of Programming from April 2014 to October 2014, overseeing the acquisition and renewal of all programming content for DISH Network. Mr. Swain joined DISH Network in 2011 as Vice President of Corporate Financial Planning and Analysis. Prior to DISH Network, Mr. Swain spent more than 15 years working in the telecommunications sector, most recently at CenturyLink, formerly Qwest Communications, where he served in multiple leadership roles in finance, including corporate financial planning and analysis, treasury and investor relations, as well as in-network engineering.

John W. Swieringa. Mr. Swieringa has served as Executive Vice President, Operations since December 2015 and is responsible for the in-home services operations, customer service and billing, and information technology for DISH Network. Mr. Swieringa previously served as Senior Vice President and Chief Information Officer from March 2014 to December 2015 and as Vice President of Information Technology Customer Applications from March 2010 to March 2014. Mr. Swieringa joined DISH Network in December 2007 serving in our finance department. Before joining DISH Network, Mr. Swieringa held corporate finance positions in various Fortune 500 companies.

There are no arrangements or understandings between any executive officer and any other person pursuant to which any executive officer was selected as such. Pursuant to the Bylaws of DISH Network, executive officers serve at the discretion of the Board of Directors.

Item 1A. RISK FACTORS

The risks and uncertainties described below are not the only ones facing us. If any of the following events occur, our business, financial condition or results of operations could be materially and adversely affected.

Competition and Economic Risks

As the pay-TV industry has matured and bundled offers combining video, broadband and/or wireless services have become more prevalent and competitive, we face intense and increasing competition from providers of video, broadband and/or wireless services, which may require us to further increase subscriber acquisition and retention spending or accept lower subscriber activations and higher subscriber churn.

Our business has historically focused on providing pay-TV services and we have traditionally competed against satellite television providers and cable companies, some of whom have greater financial, marketing and other resources than we do. In recent years, industries have been converging as providers of video, broadband and wireless services compete to deliver the next generation of service offerings. The pay-TV industry has matured and bundled offers combining video, broadband and/or wireless services have become more prevalent and competitive. In some cases, certain competitors have been able to potentially subsidize the price of video services with the price of broadband and/or wireless services. These developments, among others, have contributed to intense and increasing competition, which we expect to continue.

With respect to our DISH branded pay-TV services, we and our competitors increasingly must seek to attract a greater proportion of new subscribers from each other's existing subscriber bases rather than from first-time purchasers of pay-TV services. In addition, because other pay-TV providers may be seeking to attract a greater proportion of their new subscribers from our existing subscriber base, we may be required to increase retention spending or we may provide greater discounts or credits to acquire and retain subscribers who may spend less on our services. If our Pay-TV ARPU decreases or does not increase commensurate with increases in programming or other costs, our margins may be reduced and the long-term value of a subscriber would then decrease. In addition, our Sling branded pay-TV subscribers on average purchase lower priced programming services than DISH branded pay-TV subscribers. Accordingly, an increase in Sling branded pay-TV subscribers has a negative impact on our Pay-TV ARPU.

This increasingly competitive environment may require us to increase subscriber acquisition and retention spending or accept lower subscriber activations and higher subscriber churn. Further, as a result of this increased competitive environment and the maturation of the pay-TV industry, future growth opportunities of our DISH branded pay-TV business may be limited and our margins may be reduced, which could have a material adverse effect on our business, results of operations, financial condition and cash flow. Our gross new Pay-TV subscriber activations continue to be negatively impacted by stricter customer acquisition policies for our DISH branded pay-TV subscribers (including a focus on attaining higher quality subscribers) and increased competitive pressures, including aggressive marketing, more aggressive retention efforts, bundled discount offers combining broadband, video and/or wireless services and other discounted promotional offers.

In addition, MVPDs and other companies such as programmers are offering smaller packages of programming channels directly to customers, at prices lower than our video service package offerings. These offerings could adversely affect demand for our Pay-TV services or cause us to modify our programming packages, which may reduce our margins. During the third quarter 2016, we launched our Flex Pack skinny bundle, a smaller package of programming channels.

Moreover, mergers and acquisitions, joint ventures and alliances among cable television providers, telecommunications companies and others may result in, among other things, greater scale and financial leverage and increase the availability of offerings from providers capable of bundling video, broadband and/or wireless services in competition with our services, and may exacerbate the risks described above. For example, in May 2016, Charter completed its acquisition of Time Warner Cable and Bright House Networks (collectively “New Charter”), which created the second largest cable television provider and third largest MPVD in the U.S. This transaction created a duopoly, resulting in two broadband providers, New Charter and Comcast, controlling the vast majority of the high-speed broadband homes in the country. In addition, a significant proportion of New Charter’s high-speed broadband subscribers may lack access to alternative high-speed broadband options. Further, New Charter may be able to, among other things, foreclose or degrade our online video offerings at various points in the broadband pipe; impose data caps on consumers who access our online video offerings; and pressure third-party content owners and programmers to withhold online rights from us and raise our and other MVPDs’ third-party programming costs.

As a result of AT&T’s 2015 acquisition of DirecTV, our direct competitor and the largest satellite TV provider in the U.S. now has increased access to capital, access to AT&T’s nationwide platform for wireless mobile video, and the ability to more seamlessly bundle its video services with AT&T’s broadband Internet access and wireless services. AT&T also recently launched an OTT service, DirecTV Now, that distributes video directly to consumers over the Internet. The combined company may also be able to, among other things, utilize its increased leverage over third-party content owners and programmers to withhold online rights from us and reduce the price it pays for programming at the expense of other MVPDs, including us; thwart our entry into the wireless market, by, among other things, refusing to enter into data roaming agreements with us; underutilize key orbital spectrum resources that could be more efficiently used by us; foreclose or degrade our online video offerings at various points in the broadband pipe; and impose data caps on consumers who access our online video offerings.

In addition, in October 2016, AT&T announced its pending acquisition of Time Warner Inc. (“Time Warner”). If the proposed transaction ultimately is completed, the risks discussed above posed by the AT&T and DirecTV merger will be further exacerbated, as the addition of Time Warner’s media holdings, which include content, such as HBO, TBS, TNT, CNN, and movies, would, among other things, provide the combined company increased scale and leverage in the converging video, mobile, and broadband industries and may make it more difficult for us to obtain access to Time Warner’s programming networks on nondiscriminatory and fair terms, or at all. Furthermore, AT&T’s current practice of offering wireless subscribers access to owned video content over the Internet without counting against a subscriber’s monthly data caps (“zero rating”), may give an unfair advantage to AT&T’s own video content, which currently includes, among others, DirecTV services, including DirecTV Now, on mobile devices.

As the pay-TV industry is mature, our strategy has included an increased emphasis on acquiring and retaining higher quality subscribers, even if it means that we will acquire and retain fewer overall subscribers. We evaluate the quality of subscribers based upon a number of factors, including, among others, profitability. Our Pay-TV subscriber base has been declining due to, among other things, this strategy and the factors described above. There can be no assurance that our Pay-TV subscriber base will not continue to decline. In the event that our Pay-TV subscriber base continues to decline, it could have a material adverse long-term effect on our business, results of operations, financial condition and cash flow.

Changing consumer behavior and competition from digital media companies that provide or facilitate the delivery of video content via the Internet may reduce our gross new subscriber activations and may cause our subscribers to purchase fewer services from us or to cancel our services altogether, resulting in less revenue to us.

Our business has historically focused on providing pay-TV services, including our DISH branded and Sling branded pay-TV services. We face competition from providers of digital media, including, among others, Netflix, Hulu, Apple, Amazon, Google, Verizon, DirecTV and Sony that offer online services distributing movies, television shows and other video programming as well as programmers, such as CBS and HBO, that began selling content directly to consumers over the Internet in 2015. Some of these companies have larger customer bases, stronger brand recognition and greater financial, marketing and other resources than we do. In addition, traditional providers of video entertainment, including broadcasters, cable channels and MVPDs, are increasing their Internet-based video offerings. Some of these services charge nominal or no fees for access to their content, which could adversely affect demand for our Pay-TV services. Moreover, new technologies have been, and will likely continue to be, developed that further increase the number of competitors we face with respect to video services, including competition from piracy-based video offerings.

These products and services are also driving rapid changes in consumer behavior as consumers seek more control over when, where and how they consume content and access communications services. In particular, through technological advancements and with the large increase in the number of consumers with broadband service, a significant amount of video content has become available through online content providers for users to stream and view on their personal computers, televisions, phones, tablets, videogame consoles, and other devices, some without charging a fee to access the content. Similarly, while our customers can use their traditional video subscription to access mobile programming, an increasing number of customers are also using mobile devices as the sole means of viewing video, and an increasing number of non-traditional video providers are developing content and technologies to satisfy that demand. These technological advancements, changes in consumer behavior, and the increasing number of choices available to consumers with regard to the means by which consumers obtain video content may cause DISH Network subscribers to disconnect our services (“cord cutting”), downgrade to smaller, less expensive programming packages (“cord shaving”) or elect to purchase through online content providers a certain portion of the services that they would have historically purchased from us, such as pay per view movies, resulting in less revenue to us. There can be no assurance that our Pay-TV services will be able to compete with these other providers of digital media. Therefore, these technological advancements and changes in consumer behavior could reduce our gross new subscriber activations and could have a material adverse effect on our business, results of operations and financial condition or otherwise disrupt our business.

Our failure to effectively anticipate or adapt to competition or changes in consumer behavior, including with respect to younger consumers, could have a material adverse effect on our business, results of operations and financial condition or otherwise disrupt our business.

Economic weakness and uncertainty may adversely affect our ability to grow or maintain our business.

A substantial majority of our revenue comes from residential customers whose spending patterns may be affected by economic weakness and uncertainty. Our ability to grow or maintain our business may be adversely affected by economic weakness and uncertainty and other factors that may adversely affect the pay-TV industry. In particular, economic weakness and uncertainty could result in the following:

- ***Fewer gross new subscriber activations and increased subscriber churn.*** We could face fewer gross new subscriber activations and increased subscriber churn due to, among other things: (i) certain economic factors that impact consumers, including, among others, rising interest rates, a potential downturn in the housing market in the United States (including a decline in housing starts) and higher unemployment, which could lead to a lack of consumer confidence and lower discretionary spending; (ii) increased price competition for our products and services; and (iii) the potential loss of independent third-party retailers, who generate a significant percentage of our new subscribers, because many of them are small businesses that are more susceptible to the negative effects of economic weakness. In particular, subscriber churn may increase with respect to subscribers who purchase our lower tier programming packages and who may be more sensitive to economic weakness, including, among others, our pay-in-advance subscribers.
- ***Lower pay-TV average monthly revenue per subscriber (“Pay-TV ARPU”).*** Our subscribers may disconnect our services and a growing share of pay-TV customers are “cord shaving” to downgrade to smaller, less expensive programming packages or electing to purchase through online content providers a certain portion of the services that they would have historically purchased from us, such as pay per view movies. Cord cutting and/or cord shaving by our subscribers could negatively impact our Pay-TV ARPU. In addition, Sling branded pay-TV subscribers on average purchase lower priced programming services than DISH branded pay-TV subscribers, and therefore, as Sling branded pay-TV subscribers increase, it will have a negative impact on Pay-TV ARPU.
- ***Higher subscriber acquisition and retention costs.*** Our profits may be adversely affected by increased subscriber acquisition and retention costs necessary to attract and retain subscribers during a period of economic weakness.

Our competitors may be able to leverage their relationships with programmers to reduce their programming costs and offer exclusive content that will place them at a competitive advantage to us.

The cost of programming represents the largest percentage of our overall costs. Certain of our competitors own directly or are affiliated with companies that own programming content that may enable them to obtain lower programming costs or offer exclusive programming that may be attractive to prospective subscribers. Unlike our larger cable and satellite competitors, some of which also provide IPTV services, we have not made significant investments in programming providers. For example, in January 2011, the FCC and the Department of Justice approved a transaction between Comcast and General Electric pursuant to which they joined their programming properties, including NBC, Bravo and many others that are available in the majority of our programming packages, in a venture, NBCUniversal, controlled by Comcast. In March 2013, Comcast completed the acquisition of substantially all of General Electric’s remaining interest in NBCUniversal. This transaction may affect us adversely by, among other things, making it more difficult for us to obtain access to NBCUniversal’s programming networks on nondiscriminatory and fair terms, or at all. The FCC conditioned its approval on, among other things, Comcast complying with the terms of the FCC’s order on network neutrality, even if that order is vacated by judicial or legislative action, and Comcast licensing its affiliated content to us, other traditional pay-TV providers and certain providers of video services over the Internet on fair and nondiscriminatory terms and conditions, including, among others, price. If Comcast does not license its affiliated content to us on fair and nondiscriminatory terms and conditions, we can seek binding arbitration and continue to carry such content while the arbitration is pending. However, it is uncertain how these conditions may be interpreted and enforced by the FCC; therefore, we cannot predict the practical effect of these conditions. Also, in October 2016, AT&T announced its pending acquisition of Time Warner. This transaction would join DirecTV, which was acquired by AT&T in 2015, with Time Warner’s media holdings, which include content such as HBO, TBS, TNT, CNN, and movies. If approved, this transaction may affect us adversely by, among other things, making it more difficult for us to obtain access to Time Warner programming networks on nondiscriminatory and fair terms, or at all.

Our OTT Sling TV Internet-based services face certain risks, including, among others, significant competition.

Our Sling TV services face a number of risks, including, among others, the following, which may have a material adverse effect on our Sling TV service offerings:

- We face significant competition from programmers such as DirecTV Now and Sony Vue, which distribute live linear television programming over the Internet, from content providers such as CBS and HBO, which have begun selling content directly to consumers over the Internet, and other companies including, among others, Netflix, Hulu, Apple, Amazon, Google and Verizon, some of which have original content, larger customer bases, stronger brand recognition, and significant financial, marketing and other resources. We also face competition from piracy based video offerings;
- We offer a limited amount of programming content, and there can be no assurances that we will be able to maintain or increase the amount or type of programming content that we may offer to keep pace with, or to differentiate our Sling TV services from, other providers of online video content;
- We rely on streaming-capable devices to deliver our Sling TV services, and if we are not successful in maintaining existing, and creating new, relationships, or if we encounter technological, content licensing or other impediments to our streaming content, our ability to grow our Sling TV services could be adversely impacted;
- We may incur significant expenses to market our Sling TV services and build brand awareness, which could have a negative impact on the profitability of our Sling TV services;
- Since we rely upon the ability of consumers to access our Sling TV services through an Internet connection, changes in how network operators handle and charge for access to data that travel across their networks, such as implementing bandwidth caps or usage-based fees, could adversely impact our Sling TV services. In addition, many network operators that provide consumers with broadband service also provide these consumers with video programming, and these network operators may have an incentive to use their network infrastructure in a manner adverse to our continued growth and success. For example, as a result of AT&T's acquisition of DirecTV and the completion of the New Charter merger, these risks may be exacerbated to the extent these and other network operators are able to provide preferential treatment to their data. For example, AT&T's current zero rating practice may give an unfair advantage to AT&T's own video services, which currently include, among others, DirecTV services, including DirecTV Now;
- We may not be able to timely scale our technology, systems and operational practices related to our Sling TV services to effectively and reliably handle growth in subscribers and features related to our services;
- Our Sling Orange service has limitations that may not be applicable to our competitors, such as not being able to view content on more than one device simultaneously, and with respect to certain programming, not being able to provide a feature to record content for future viewing. If we are unable to remove those limitations and add such features to the Sling Orange service in the future, our ability to compete with other offerings could be adversely impacted;
- The adoption or modification of laws and regulations relating to the Internet could limit or otherwise adversely affect the manner in which we conduct our Sling TV services and could cause us to incur additional expenses or alter our business model; and
- We rely on EchoStar to provide the streaming delivery technology and infrastructure to support our Sling TV services. In addition, we license our OTT service brand name "Sling" from EchoStar, and there can be no assurance that we will be able to continue to license the "Sling" brand name on acceptable terms or at all.

We face increasing competition from other distributors of unique programming services such as foreign language, sports programming, and original content that may limit our ability to maintain subscribers that desire these unique programming services.

We face increasing competition from other distributors of unique programming services such as foreign language, sports programming, and original content including programming distributed over the Internet. There can be no assurance that we will maintain subscribers that desire these unique programming services. For example, the increasing availability of foreign language programming from our competitors, which in certain cases has resulted from our inability to renew programming agreements on an exclusive basis or at all, as well as competition from piracy-based video offerings, could contribute to an increase in our subscriber churn. Our agreements with distributors of foreign language programming have varying expiration dates, and some agreements are on a month-to-month basis. There can be no assurance that we will be able to grow or maintain subscribers that desire these unique programming services such as foreign language and sports programming.

Operational and Service Delivery Risks

If we do not continue improving our operational performance and customer satisfaction, our gross new subscriber activations may decrease and our subscriber churn may increase.

If we are unable to continue improving our operational performance and customer satisfaction, we may experience a decrease in gross new subscriber activations and an increase in subscriber churn, which could have a material adverse effect on our business, financial condition and results of operations. To improve our operational performance, we continue to make investments in staffing, training, information systems, and other initiatives, primarily in our call center and in-home service operations. These investments are intended to help combat inefficiencies introduced by the increasing complexity of our business, improve customer satisfaction, reduce subscriber churn, increase productivity, and allow us to scale better over the long run. We cannot, however, be certain that our spending will ultimately be successful in improving our operational performance, and if unsuccessful, we may have to incur higher costs to improve our operational performance. While we believe that such costs will be outweighed by longer-term benefits, there can be no assurance when or if we will realize these benefits at all. If we are unable to improve our operational performance, our future gross new subscriber activations and existing subscriber churn may be negatively impacted, which could in turn adversely affect our revenue growth and results of operations.

If our gross new subscriber activations continue to decrease, or if our subscriber churn, subscriber acquisition costs or retention costs increase, our financial performance will be adversely affected.

We may incur increased costs to acquire new subscribers and retain existing subscribers. Our gross new Pay-TV subscriber activations, net Pay-TV subscriber additions, and Pay-TV churn rate continue to be negatively impacted by stricter customer acquisition and retention policies for our DISH branded pay-TV subscribers, including an increased emphasis on acquiring and retaining higher quality subscribers. In addition, our subscriber acquisition costs could increase as a result of increased spending for advertising and, with respect to our DISH branded pay-TV services, the installation of more HD and DVR receivers, which are generally more expensive than other receivers. Retention costs with respect to our DISH branded pay-TV services may be driven higher by increased upgrades of existing subscribers' equipment to HD and DVR receivers. Meanwhile, as part of our increased emphasis on retaining higher quality subscribers, we have been more selective in issuing retention credits, which has had a negative impact on our Pay-TV churn rate. Although we expect to continue to incur expenses, such as providing retention credits and other subscriber acquisition and retention expenses, to attract and retain subscribers, there can be no assurance that our efforts will generate new subscribers or result in a lower churn rate. Additionally, certain of our promotions, including, among others, pay-in-advance, continue to allow consumers with relatively lower credit scores to become subscribers. These subscribers typically churn at a higher rate.

Our subscriber acquisition costs and our subscriber retention costs can vary significantly from period to period and can cause material variability to our net income (loss) and free cash flow. Any material increase in subscriber acquisition or retention costs from current levels could have a material adverse effect on our business, financial condition and results of operations.

Programming expenses are increasing and could adversely affect our future financial condition and results of operations.

Our programming costs currently represent the largest component of our total expense and we expect these costs to continue to increase. The pay-TV industry has continued to experience an increase in the cost of programming, especially local broadcast channels and sports programming. In addition, certain programming costs are rising at a much faster rate than wages or inflation. These factors may be exacerbated by the increasing trend of consolidation in the media industry, which may further increase our programming expenses. Our ability to compete successfully will depend, among other things, on our ability to continue to obtain desirable programming and deliver it to our subscribers at competitive prices.

When offering new programming, or upon expiration of existing contracts, programming suppliers have historically attempted to increase the rates that they charge us for programming. We expect this practice to continue, which, if successful, would increase our programming costs. In addition, our programming expenses may also increase as we add programming to our video services or distribute existing programming to our customers through additional delivery services, such as Sling TV. As a result, our margins may face further pressure if we are unable to renew our long-term programming contracts on acceptable pricing and other economic terms. Alternatively, to attempt to mitigate the effect of price increases or for other reasons, we may elect not to carry or may be unable to carry certain channels, which could adversely affect our subscriber growth or result in higher churn.

In addition, increases in programming costs generally cause us to increase the rates that we charge our subscribers, which could in turn cause our existing Pay-TV subscribers to disconnect our service or cause potential new Pay-TV subscribers to choose not to subscribe to our service. Therefore, we may be unable to pass increased programming costs on to our customers, which could have a material adverse effect on our business, financial condition and results of operations.

We depend on others to provide the programming that we offer to our subscribers and, if we fail to obtain or lose access to this programming, our gross new subscriber activations may decline and our subscriber churn may increase.

We depend on third parties to provide us with programming services. Our programming agreements have remaining terms ranging from less than one to up to several years and contain various renewal, expiration and/or termination provisions. We may not be able to renew these agreements on acceptable terms or at all, and these agreements may be terminated prior to expiration of their original term. In recent years, negotiations over programming carriage contracts generally remain contentious, and certain programmers have, in the past, limited our access to their programming in connection with those negotiations and the scheduled expiration of their programming carriage contracts with us. As national and local programming interruptions and threatened programming interruptions have become more frequent in recent years, including, among others, the removal by Tribune Broadcasting Company (“Tribune”) of certain local broadcast channels from our programming lineup during the second and third quarters of 2016, in certain cases such interruptions have had a negative impact on our gross new Pay-TV subscriber activations, net Pay-TV subscriber additions and Pay-TV churn rate. We cannot predict with any certainty the impact to our gross new Pay-TV subscriber activations, net Pay-TV subscriber additions and Pay-TV churn rate resulting from similar programming interruptions or threatened programming interruptions that may occur in the future. As a result, we may at times suffer from periods of lower gross new Pay-TV subscriber activations, lower net Pay-TV subscriber additions or higher net Pay-TV subscriber losses, and higher Pay-TV churn rates.

We typically have a few programming contracts with major content providers up for renewal each year and if we are unable to renew any of these agreements or the other parties terminate the agreements, there can be no assurance that we would be able to obtain substitute programming, or that such substitute programming would be comparable in quality or cost to our existing programming. In addition, failure to obtain access to certain programming or loss of access to programming, particularly programming provided by major content providers and/or programming popular with our subscribers, could have a material adverse effect on our business, financial condition and results of operations, including, among other things, our gross new Pay-TV subscriber activations, net Pay-TV subscriber additions and Pay-TV churn rate.

We may not be able to obtain necessary retransmission consent agreements at acceptable rates, or at all, from local network stations.

The Copyright Act generally gives satellite companies a statutory copyright license to retransmit local broadcast channels by satellite back into the market from which they originated, subject to obtaining the retransmission consent of local network stations that do not elect “must carry” status, as required by the Communications Act. If we fail to reach retransmission consent agreements with such broadcasters, we cannot carry their signals. This could have an adverse effect on our strategy to compete with cable and other satellite companies that provide local signals. While we have been able to reach retransmission consent agreements with most of these local network stations, from time to time there are stations with which we have not been able to reach an agreement. We cannot be sure that we will secure these agreements or that we will secure new agreements on acceptable terms, or at all, upon the expiration of our current retransmission consent agreements, some of which are short-term. In recent years, national broadcasters have used their ownership of certain local broadcast stations to require us to carry additional cable programming in exchange for retransmission consent of their local broadcast stations. These requirements may place constraints on available capacity on our satellites for other programming. Furthermore, the rates we are charged for retransmitting local channels have been increasing substantially and may exceed our ability to increase our prices to our customers, which could have a material adverse effect on our business, financial condition and results of operations.

We may be required to make substantial additional investments to maintain competitive programming offerings.

We believe that the availability and extent of HD programming and other value-added services such as access to video via mobile devices continue to be significant factors in consumers’ choice among pay-TV providers. Other pay-TV providers may have more successfully marketed and promoted their HD programming packages and value-added services and may also be better equipped and have greater resources to increase their HD offerings and value-added services to respond to increasing consumer demand. In addition, even though it remains a small portion of the market, consumer demand for 4K HD televisions and programming will likely increase in the future. We may be required to make substantial additional investments in infrastructure to respond to competitive pressure to deliver enhanced programming, and other value-added services, and there can be no assurance that we will be able to compete effectively with offerings from other pay-TV providers.

Any failure or inadequacy of our information technology infrastructure and communications systems, including without limitation those caused by cyber-attacks or other malicious activities, could disrupt or harm our business.

The capacity, reliability and security of our information technology hardware and software infrastructure (including our billing systems) and communications systems are important to the operation of our current business, which would suffer in the event of system failures or cyber-attacks. Likewise, our ability to expand and update our information technology infrastructure in response to our growth and changing needs is important to the continued implementation of our new service offering initiatives. Our inability to expand or upgrade our technology infrastructure could have adverse consequences, which could include, among other things, the delayed implementation of new service offerings, service or billing interruptions, and the diversion of development resources. We rely on third parties for developing key components of our information technology and communications systems and ongoing service. Some of our key systems and operations, including those supplied by third-party providers, are not fully redundant, and our disaster recovery planning cannot account for all eventualities. Interruption and/or failure of any of these systems could disrupt our operations, interrupt our services and damage our reputation, thus adversely impacting our ability to provide our services, retain our current subscribers and attract new subscribers.

In addition, although we take protective measures and endeavor to modify them as circumstances warrant, our information technology hardware and software infrastructure and communications systems may be vulnerable to a variety of interruptions, including without limitation, natural disasters, terrorist attacks, telecommunications failures, cyber-attacks and other malicious activities such as unauthorized access, misuse, computer viruses or other malicious code, computer denial of service attacks and other events that could disrupt or harm our business. In addition, third-party providers of some of our key systems may also experience interruptions to their information technology hardware and software infrastructure and communications systems that could adversely impact us and over which we may have limited or no control. We may obtain certain confidential, proprietary and personal information about our customers, personnel and vendors, and may provide this information to third parties in connection with our business. If one or more of such interruptions or failures occur to us or our third-party providers, it potentially could jeopardize such information and other information processed and stored in, and transmitted through, our or our third-party providers' information technology hardware and software infrastructure and communications systems, or otherwise cause interruptions or malfunctions in our operations, which could result in lawsuits, government claims, investigations or proceedings, significant losses or reputational damage. Due to the fast-moving pace of technology, it may be difficult to detect, contain and remediate every such event. We may be required to expend significant additional resources to modify our protective measures or to investigate and remediate vulnerabilities or other exposures, and we may be subject to financial losses. Furthermore, the amount and scope of insurance we maintain may not cover expenses related to such activities or events.

As a result of the increasing awareness concerning the importance of safeguarding personal information, the potential misuse of such information and legislation that has been adopted or is being considered regarding the protection, privacy and security of personal information, the potential liability associated with information-related risks is increasing, particularly for businesses like ours that handle personal customer data. The occurrence of any such network or information system related events or security breaches could have a material adverse effect on our reputation, business, financial condition and results of operations. Significant incidents could result in a disruption of our operations, customer dissatisfaction, damage to our reputation or a loss of customers and revenues.

We currently depend on EchoStar to design, develop and manufacture substantially all of our new DISH branded pay-TV set-top boxes and certain related components, to provide the vast majority of our satellite transponder capacity, to provide digital broadcast operations and other services to us, and to provide streaming delivery technology and infrastructure for our Sling TV services. Our business would be adversely affected if EchoStar ceases to provide these products and services to us and we are unable to obtain suitable replacement products and services from third parties.

EchoStar is our primary supplier of our DISH branded pay-TV digital set-top boxes and digital broadcast operations. In addition, EchoStar provides the vast majority of our satellite transponder capacity, is a key supplier of related services to us, and provides streaming delivery technology and infrastructure for our Sling TV services. We purchase digital set-top boxes from EchoStar pursuant to a contract that expires on December 31, 2017. EchoStar provides digital broadcast operations to us pursuant to a contract that expires on December 31, 2017. EchoStar has no obligation to supply digital set-top boxes or digital broadcast operations to us after these dates. We may be unable to renew agreements for digital set-top boxes or digital broadcast operations with EchoStar on acceptable terms or at all. We lease the vast majority of our satellite transponder capacity from EchoStar. Equipment, satellite transponder leasing and digital broadcast operation costs may increase beyond our current expectations. EchoStar's inability to develop and produce, or our inability to obtain, equipment with the latest technology, or our inability to obtain satellite transponder capacity and digital broadcast operations and other services from third parties, could adversely affect our gross new subscriber activations and subscriber churn rate and cause related revenue to decline.

Furthermore, due to the lack of compatibility of our infrastructure with the set-top boxes of a provider other than EchoStar, any transition to a new supplier of set-top boxes could take a significant period of time to complete, cause us to incur significant costs and negatively affect our gross new subscriber activations and subscriber churn. For example, the proprietary nature of the Slingbox "placeshifting" functionality and certain other technology used in EchoStar's set-top boxes may significantly limit our ability to obtain set-top boxes with the same or similar features from any other provider of set-top boxes.

If we were to switch to another provider of set-top boxes, we may have to implement additional infrastructure to support the set-top boxes purchased from such new provider, which could significantly increase our costs. In addition, differences in, among other things, the user interface between set-top boxes provided by EchoStar and those of any other provider could cause subscriber confusion, which could increase our costs and have a material adverse effect on our gross new subscriber activations and subscriber churn. Furthermore, switching to a new provider of set-top boxes may cause a reduction in our supply of set-top boxes and thus delay our ability to ship set-top boxes, which could have a material adverse effect on our gross new subscriber activations and subscriber churn rate and cause related revenue to decline.

See Note 18 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information regarding the Share Exchange Agreement with EchoStar.

Technology in the pay-TV industry changes rapidly, and our success may depend in part on our timely introduction and implementation of, and effective investment in, new competitive products and services and more advanced equipment, and our failure to do so could cause our products and services to become obsolete and could negatively impact our business.

Technology in the pay-TV industry changes rapidly as new technologies are developed, which could cause our products and services to become obsolete. We and our suppliers may not be able to keep pace with technological developments. Our operating results are dependent to a significant extent upon our ability to continue to introduce new products and services, to upgrade existing products and services on a timely basis, and to reduce costs of our existing products and services. We may not be able to successfully identify new product or service opportunities or develop and market these opportunities in a timely or cost-effective manner. The research and development of new, technologically advanced products is a complex and uncertain process requiring high levels of innovation and investment. The success of new product and service development depends on many factors, including among others, the following:

- difficulties and delays in the development, production, timely completion, testing and marketing of products and services;
- the cost of the products and services;
- proper identification of customer need and customer acceptance of products and services;
- the development of, approval of and compliance with industry standards;
- the amount of resources we must devote to the development of new technologies; and
- the ability to differentiate our products and services and compete with other companies in the same markets.

If the new technologies on which we focus our research and development investments fail to achieve acceptance in the marketplace, our competitive position could be negatively impacted, causing a reduction in our revenues and earnings. For example, our competitors could use proprietary technologies that are perceived by the market as being superior. Further, after we have incurred substantial costs, one or more of the products or services under our development, or under development by one or more of our strategic partners, could become obsolete prior to it being widely adopted.

In addition, our competitive position depends in part on our ability to offer new DISH branded pay-TV subscribers and upgrade existing subscribers with more advanced equipment, such as receivers with DVR and HD technology and by otherwise making additional infrastructure investments, such as those related to our information technology and call centers. We may also be at a competitive disadvantage in developing and introducing complex new products and services for our DISH branded pay-TV services because of the substantial costs we may incur in making these products or services available across our installed base of subscribers. Furthermore, the continued demand for HD programming continues to require investments in additional satellite capacity. We may not be able to pass on to our subscribers the entire cost of these upgrades and infrastructure investments.

New technologies could also create new competitors for us. For instance, we face increasing consumer demand for the delivery of digital video services via the Internet, including providing our Sling TV services and what we refer to as “DISH Anywhere.” We expect to continue to face increased competition from companies who use the Internet to deliver digital video services as the speed and quality of broadband and wireless networks continues to improve.

Technological innovation is important to our success and depends, to a significant degree, on the work of technically skilled employees. We rely on EchoStar to design, develop and manufacture set-top boxes with advanced features and functionality and to provide the streaming delivery technology and infrastructure for our Sling TV services. If either we or EchoStar is unable to attract and retain appropriately technically skilled employees, our competitive position could be materially and adversely affected. In addition, delays in the delivery of components or other unforeseen problems associated with our technology may occur that could materially and adversely affect our ability to generate revenue, offer new products and services and remain competitive.

If our products and services, including without limitation our DISH branded and Sling branded products and services, are not competitive, our business could suffer and our financial performance could be negatively impacted. Our products and services may also experience quality problems, including outages and service slowdowns, from time to time. If the quality of our products and services do not meet our customers' expectations, then our business, and ultimately our reputation, could be negatively impacted.

We rely on a single vendor or a limited number of vendors to provide certain key products or services to us such as information technology support, billing systems, and security access devices, and the inability of these key vendors to meet our needs could have a material adverse effect on our business.

Historically, we have contracted with and rely on a single vendor or a limited number of vendors to provide certain key products or services to us such as information technology support, billing systems, and security access devices. If these vendors are unable to meet our needs because they fail to perform adequately, are no longer in business, are experiencing shortages or discontinue a certain product or service we need, our business, financial condition and results of operations may be adversely affected. While alternative sources for these products and services exist, we may not be able to develop these alternative sources quickly and cost-effectively, which could materially impair our ability to timely deliver our products to our subscribers or operate our business. Furthermore, our vendors may request changes in pricing, payment terms or other contractual obligations between the parties, which could cause us to make substantial additional investments.

Our primary supplier of new set-top boxes, EchoStar, relies on a few suppliers and in some cases a single supplier, for many components of our new set-top boxes, and any reduction or interruption in supplies or significant increase in the price of supplies could have a negative impact on our business.

EchoStar relies on a few suppliers and in some cases a single supplier, for many components of our new set-top boxes that we provide to subscribers in order to deliver our digital television services. Our ability to meet customer demand depends, in part, on EchoStar's ability to obtain timely and adequate delivery of quality materials, parts and components from suppliers. In the event of an interruption of supply or a significant price increase from these suppliers, EchoStar may not be able to diversify sources of supply in a timely manner, which could have a negative impact on our business. Further, due to increased demand for products, electronic manufacturers may experience shortages for certain components, from time to time. EchoStar has experienced in the past and may continue to experience shortages driven by raw material availability, manufacturing capacity, labor shortages, industry allocations, natural disasters, logistical delays and significant changes in the financial or business conditions of its suppliers that negatively impact our operations. Any such delays or constraints could have a material adverse effect on our business, financial condition and results of operations, including, among other things, our gross new subscriber activations.

Our programming signals are subject to theft, and we are vulnerable to other forms of fraud that could require us to make significant expenditures to remedy.

Increases in theft of our signal or our competitors' signals could, in addition to reducing gross new subscriber activations, also cause subscriber churn to increase. To combat signal theft and improve the security of our broadcast system, we use microchips embedded in credit card sized access cards, called "smart cards," or security chips in our receiver systems to control access to authorized programming content ("Security Access Devices").

Our signal encryption has been compromised in the past and may be compromised in the future even though we continue to respond with significant investment in security measures, such as Security Access Device replacement programs and updates in security software, that are intended to make signal theft more difficult. It has been our prior experience that security measures may only be effective for short periods of time or not at all and that we remain susceptible to additional signal theft. We expect that future replacements of these Security Access Devices may be necessary to keep our system secure. We cannot ensure that we will be successful in reducing or controlling theft of our programming content and we may incur additional costs in the future if our system's security is compromised.

We are also vulnerable to other forms of fraud. While we are addressing certain fraud through a number of actions, including terminating independent third-party retailers that we believe violated our business rules, there can be no assurance that we will not continue to experience fraud, which could impact our gross new subscriber activations and subscriber churn. Economic weakness may create greater incentive for signal theft, piracy and other forms of fraud, which could lead to higher subscriber churn and reduced revenue.

We depend on independent third parties to solicit orders for our services that represent a significant percentage of our total gross new subscriber activations.

While we offer products and services through direct sales channels, a significant percentage of our total gross new subscriber activations are generated through independent third parties such as small satellite retailers, direct marketing groups, local and regional consumer electronics stores, nationwide retailers, and telecommunications companies. Most of our independent third-party retailers are not exclusive to us and some of our independent third-party retailers may favor our competitors' products and services over ours based on the relative financial arrangements associated with marketing our products and services and those of our competitors. Furthermore, most of these independent third-party retailers are significantly smaller than we are and may be more susceptible to economic weaknesses that make it more difficult for them to operate profitably. Because our independent third-party retailers receive most of their incentive value at activation and not over an extended period of time, our interests may not always be aligned with our independent third-party retailers. It may be difficult to better align our interests with our independent third-party retailers because of their capital and liquidity constraints. Loss of these relationships could have an adverse effect on our subscriber base and certain of our other key operating metrics because we may not be able to develop comparable alternative distribution channels.

We have limited satellite capacity and failures or reduced capacity could adversely affect our DISH branded pay-TV service.

Operation of our DISH branded pay-TV service requires that we have adequate satellite transmission capacity for the programming we offer. While we generally have had in-orbit satellite capacity sufficient to transmit our existing channels and some backup capacity to recover the transmission of certain critical programming, our backup capacity is limited. We lease substantially all of our satellite capacity from third parties, including the vast majority of our satellite transponder capacity from EchoStar, and we do not carry commercial insurance on any of the satellites that we lease from them.

Our ability to earn revenue from our DISH branded pay-TV service depends on the usefulness of our owned and leased satellites, each of which has a limited useful life. A number of factors affect the useful lives of the satellites, including, among other things, the quality of their construction, the durability of their component parts, the ability to continue to maintain proper orbit and control over the satellite's functions, the efficiency of the launch vehicle used, and the remaining on-board fuel following orbit insertion. Generally, the minimum design life of each of our owned and leased satellites ranges from 12 to 15 years. We can provide no assurance, however, as to the actual useful lives of any of these satellites. Our operating results could be adversely affected if the useful life of any of our owned or leased satellites were significantly shorter than the minimum design life.

In the event of a failure or loss of any of our owned or leased satellites, we may need to acquire or lease additional satellite capacity or relocate one of our other owned or leased satellites and use it as a replacement for the failed or lost satellite, any of which could have a material adverse effect on our business, financial condition and results of operations. Such a failure could result in a prolonged loss of critical programming. A relocation would require FCC approval and, among other things, may require a showing to the FCC that the replacement satellite would not cause additional interference compared to the failed or lost satellite. We cannot be certain that we could obtain such FCC approval. If we choose to use a satellite in this manner, this use could adversely affect our ability to satisfy certain operational conditions associated with our authorizations. Failure to satisfy those conditions could result in the loss of such authorizations, which would have an adverse effect on our ability to generate revenues.

Our owned and leased satellites are subject to construction, launch, operational and environmental risks that could limit our ability to utilize these satellites.

Construction and launch risks. Operation of our DISH branded pay-TV service requires that we have adequate satellite transmission capacity for the programming we offer. To accomplish this goal, from time to time, new satellites need to be built and launched. Satellite construction and launch is subject to significant risks, including construction and launch delays, launch failure and incorrect orbital placement. Certain launch vehicles that may be used by us have either unproven track records or have experienced launch failures in the recent past. The risks of launch delay and failure are usually greater when the launch vehicle does not have a track record of previous successful flights. Launch failures result in significant delays in the deployment of satellites because of the need both to construct replacement satellites, which can take more than three years, and to obtain other launch opportunities. Significant construction or launch delays could materially and adversely affect our ability to generate revenues. If we were unable to obtain launch insurance, or obtain launch insurance at rates we deem commercially reasonable, and a significant launch failure were to occur, it could impact our ability to fund future satellite procurement and launch opportunities.

In addition, the occurrence of future launch failures for other operators may delay the deployment of our satellites and materially and adversely affect our ability to insure the launch of our satellites at commercially reasonable premiums, if at all. See “*We generally do not carry commercial launch or in-orbit insurance on any of the satellites that we use, other than certain satellites leased from third parties, and could face significant impairment charges if any of our owned satellites fail*” below for further information.

Operational risks. Satellites are subject to significant operational risks while in orbit. These risks include malfunctions, commonly referred to as anomalies that have occurred in our satellites and the satellites of other operators as a result of various factors, such as manufacturing defects, problems with the power systems or control systems of the satellites and general failures resulting from operating satellites in the harsh environment of space.

Although we work closely with the satellite manufacturers to determine and eliminate the cause of anomalies in new satellites and provide for redundancies of many critical components in the satellites, we may experience anomalies in the future, whether of the types described above or arising from the failure of other systems or components.

Any single anomaly or series of anomalies could materially and adversely affect our operations and revenues and our relationship with current customers, as well as our ability to attract new customers for our Pay-TV services. In particular, future anomalies may result in the loss of individual transponders on a satellite, a group of transponders on that satellite or the entire satellite, depending on the nature of the anomaly. Anomalies may also reduce the expected useful life of a satellite, thereby reducing the channels that could be offered using that satellite, or create additional expenses due to the need to provide replacement or back-up satellites. See the disclosures relating to satellite anomalies set forth under Note 8 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Environmental risks. Meteoroid events pose a potential threat to all in-orbit satellites. The probability that meteoroids will damage those satellites increases significantly when the Earth passes through the particulate stream left behind by comets. Occasionally, increased solar activity also poses a potential threat to all in-orbit satellites.

Some decommissioned satellites are in uncontrolled orbits that pass through the geostationary belt at various points, and present hazards to operational satellites, including our satellites. We may be required to perform maneuvers to avoid collisions and these maneuvers may prove unsuccessful or could reduce the useful life of the satellite through the expenditure of fuel to perform these maneuvers. The loss, damage or destruction of any of our satellites as a result of an electrostatic storm, collision with space debris, malfunction or other event could have a material adverse effect on our business, financial condition and results of operations.

We generally do not carry commercial launch or in-orbit insurance on any of the satellites that we use, other than certain satellites leased from third parties, and could face significant impairment charges if any of our owned satellites fail.

Generally, we do not carry commercial launch or in-orbit insurance on any of the satellites we use, other than certain satellites leased from third parties, and generally do not use commercial insurance to mitigate the potential financial impact of launch or in-orbit failures because we believe that the cost of insurance premiums is uneconomical relative to the risk of such failures. We lease substantially all of our satellite capacity from third parties, including the vast majority of our satellite transponder capacity from EchoStar, and we do not carry commercial insurance on any of the satellites we lease from them. While we generally have had in-orbit satellite capacity sufficient to transmit our existing channels and some backup capacity to recover the transmission of certain critical programming, our backup capacity is limited. In the event of a failure or loss of any of our owned or leased satellites, we may need to acquire or lease additional satellite capacity or relocate one of our other owned or leased satellites and use it as a replacement for the failed or lost satellite. If one or more of our owned in-orbit satellites fail, we could be required to record significant impairment charges.

We may have potential conflicts of interest with EchoStar due to our common ownership and management.

Questions relating to conflicts of interest may arise between EchoStar and us in a number of areas relating to our past and ongoing relationships. Areas in which conflicts of interest between EchoStar and us could arise include, but are not limited to, the following:

- ***Cross officerships, directorships and stock ownership.*** We have certain overlap in directors and executive officers with EchoStar. These individuals may have actual or apparent conflicts of interest with respect to matters involving or affecting each company. Our Board of Directors and executive officers include persons who are members of the Board of Directors of EchoStar, including Charles W. Ergen, who serves as the Chairman of EchoStar and our Chairman and Chief Executive Officer. The executive officers and the members of our Board of Directors who are members of the Board of Directors of EchoStar have fiduciary duties to EchoStar's shareholders. For example, there is the potential for a conflict of interest when we or EchoStar look at acquisitions and other business opportunities that may be suitable for both companies. In addition, certain of our directors and officers own EchoStar stock and options to purchase EchoStar stock. Mr. Ergen owns approximately 36.8% of EchoStar's total equity securities (assuming conversion of all Class B Common Stock into Class A Common Stock) and beneficially owns approximately 43.4% of EchoStar's total equity securities (assuming conversion of only the Class B Common Stock held by Mr. Ergen into Class A Common Stock). Under either a beneficial or equity calculation method, Mr. Ergen controls approximately 63.7% of the voting power of EchoStar. Mr. Ergen's ownership of EchoStar excludes 14,493,094 shares of its Class A Common Stock issuable upon conversion of shares of its Class B Common Stock currently held by certain trusts established by Mr. Ergen for the benefit of his family. These trusts own approximately 15.4% of EchoStar's total equity securities (assuming conversion of all Class B Common Stock into Class A Common Stock) and beneficially own approximately 23.7% of EchoStar's total equity securities (assuming conversion of only the Class B Common Stock held by such trusts into Class A Common Stock). Under either a beneficial or equity calculation method, these trusts possess approximately 27.7% of EchoStar's total voting power. These ownership interests could create actual, apparent or potential conflicts of interest when these individuals are faced with decisions that could have different implications for us and EchoStar. Furthermore, Mr. Ergen is employed by both us and EchoStar. In addition, as a result of the Satellite and Tracking Stock Transaction discussed in Note 18 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K, we own shares of Tracking Stock that generally tracks the residential retail satellite broadband business of HNS, a wholly-owned subsidiary of HSSC, including without limitation the operations, assets and liabilities attributed to the Hughes residential retail satellite broadband business (collectively, the "Hughes Retail Group"). The shares of the Tracking Stock issued to us represent an aggregate 80% economic interest in the Hughes Retail Group. Although our investment in the Tracking Stock represents an aggregate 80% economic interest in the Hughes Retail Group, we have no operational control or significant influence over the Hughes Retail Group business, and currently there is no public market for the Tracking Stock. Further, effective July 1, 2012, we and EchoStar formed Sling TV Holding L.L.C. ("Sling TV Holding," formerly known as DISH Digital Holding L.L.C.), which was owned two-thirds by us and one-third by EchoStar. Sling TV Holding was formed to develop and commercialize certain advanced technologies. Effective August 1, 2014, EchoStar and Sling TV Holding entered into an Exchange Agreement pursuant to which, among other things, Sling TV Holding distributed certain assets to EchoStar and EchoStar reduced its interest in Sling TV Holding to a 10% non-voting interest. We now have a 90% equity interest and a 100% voting interest in Sling TV Holding.

- *Intercompany agreements with EchoStar.* In connection with and following the Spin-off, we and EchoStar have entered into certain agreements pursuant to which we obtain certain products, services and rights from EchoStar, EchoStar obtains certain products, services and rights from us, and we and EchoStar have indemnified each other against certain liabilities arising from our respective businesses. See Note 18 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on our Related Party Transactions with EchoStar. The terms of certain of these agreements were established while EchoStar was a wholly-owned subsidiary of us and were not the result of arm's length negotiations. The allocation of assets, liabilities, rights, indemnifications and other obligations between EchoStar and us under the separation and other intercompany agreements we entered into with EchoStar, in connection with the Spin-off, may have been different if agreed to by two unaffiliated parties. Had these agreements been negotiated with unaffiliated third parties, their terms may have been more favorable, or less favorable, to us. In addition, conflicts could arise between us and EchoStar in the interpretation or any extension or renegotiation of these existing agreements.
- *Additional intercompany transactions.* EchoStar and its subsidiaries have and will continue to enter into transactions with us and our subsidiaries. Although the terms of any such transactions will be established based upon negotiations between EchoStar and us and, when appropriate, subject to the approval of a committee of the non-interlocking directors or in certain instances non-interlocking management, there can be no assurance that the terms of any such transactions will be as favorable to us or our subsidiaries or affiliates as may otherwise be obtained between unaffiliated parties.
- *Business opportunities.* We have historically retained, and in the future may acquire, interests in various companies that have subsidiaries or controlled affiliates that own or operate domestic or foreign services that may compete with services offered by EchoStar. We may also compete with EchoStar when we participate in auctions for spectrum or orbital slots for our satellites. In addition, EchoStar may in the future use its satellites, uplink and transmission assets to compete directly against us in the subscription television business.

We may not be able to resolve any potential conflicts of interest with EchoStar, and, even if we do so, the resolution may be less favorable to us than if we were dealing with an unaffiliated party.

Other than certain arrangements with EchoStar that we entered into in connection with Sling TV Holding, which, subject to certain exceptions, limit EchoStar's and our ability to operate an IPTV service other than operated by Sling TV Holding, we do not have agreements with EchoStar that would prevent either company from competing with the other.

See Note 18 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information regarding the Share Exchange Agreement with EchoStar.

We rely on key personnel and the loss of their services may negatively affect our business.

We believe that our future success will depend to a significant extent upon the performance of Charles W. Ergen, our Chairman and Chief Executive Officer, and certain other executives. The loss of Mr. Ergen or of certain other key executives could have a material adverse effect on our business, financial condition and results of operations. Although all of our executives have executed agreements limiting their ability to work for or consult with competitors if they leave us, we do not have employment agreements with any of them. Mr. Ergen also serves as the Chairman of EchoStar. To the extent our officers are performing services for EchoStar, this may divert their time and attention away from our business and may therefore adversely affect our business.

Acquisition and Capital Structure Risks

We have made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, we have made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses.

DISH Network Spectrum

We have invested over \$5.0 billion since 2008 to acquire certain wireless spectrum licenses and related assets.

700 MHz Licenses. In 2008, we paid \$712 million to acquire certain 700 MHz wireless spectrum licenses, which were granted to us by the FCC in February 2009. At the time they were granted, these licenses were subject to certain interim and final build-out requirements. On October 29, 2013, the FCC issued an order approving a voluntary industry solution to resolve certain interoperability issues affecting the lower 700 MHz spectrum band (the “Interoperability Solution Order”), which requires us to reduce power emissions on our 700 MHz licenses. As part of the Interoperability Solution Order, the FCC, among other things, approved our request to modify the original interim and final build-out requirements associated with our 700 MHz licenses so that by March 2017, we must provide signal coverage and offer service to at least 40% of our total E Block population (the “Modified 700 MHz Interim Build-Out Requirement”). The FCC also approved our request to modify the 700 MHz Final Build-Out Requirement so that by March 2021, we must provide signal coverage and offer service to at least 70% of the population in each of our E Block license areas (the “Modified 700 MHz Final Build-Out Requirement”). While the modifications to our 700 MHz licenses provide us additional time to complete the build-out requirements, the reduction in power emissions could have an adverse impact on our ability to fully utilize our 700 MHz licenses. If the Modified 700 MHz Interim Build-Out Requirement is not met, the Modified 700 MHz Final Build-Out Requirement may be accelerated by one year, from March 2021 to March 2020, and we could face the reduction of license area(s). If the Modified 700 MHz Final Build-Out Requirement is not met, our authorization may terminate for the geographic portion of each license in which we are not providing service.

AWS-4 Licenses. On March 2, 2012, the FCC approved the transfer of 40 MHz of wireless spectrum licenses held by DBSD North America and TerreStar to us. On March 9, 2012, we completed the DBSD Transaction and the TerreStar Transaction, pursuant to which we acquired, among other things, certain satellite assets and wireless spectrum licenses held by DBSD North America and TerreStar. The total consideration to acquire the DBSD North America and TerreStar assets was approximately \$2.860 billion.

On February 15, 2013, the FCC issued an order, which became effective on March 7, 2013, modifying our licenses to expand our terrestrial operating authority with AWS-4 authority. That order also mandated certain interim and final build-out requirements for the licenses. By March 2017, we must provide terrestrial signal coverage and offer terrestrial service to at least 40% of the aggregate population represented by all of the areas covered by the licenses (the “AWS-4 Interim Build-Out Requirement”). By March 2020, we were required to provide terrestrial signal coverage and offer terrestrial service to at least 70% of the population in each area covered by an individual license (the “AWS-4 Final Build-Out Requirement”).

On December 20, 2013, the FCC issued a further order that, among other things, extended the AWS-4 Final Build-Out Requirement by one year to March 2021 (the “Modified AWS-4 Final Build-Out Requirement”). If the AWS-4 Interim Build-Out Requirement is not met, the Modified AWS-4 Final Build-Out Requirement may be accelerated by one year, from March 2021 to March 2020. If the Modified AWS-4 Final Build-Out Requirement is not met, our terrestrial authorization for each license area in which we do not meet the requirement may terminate. The FCC’s December 20, 2013 order also conditionally waived certain FCC rules for our AWS-4 licenses to allow us to repurpose all 20 MHz of our uplink spectrum (2000-2020 MHz) for terrestrial downlink operations. On June 1, 2016, we notified the FCC that we had elected to use our AWS-4 uplink spectrum for terrestrial downlink operations, and effective June 7, 2016, the FCC modified our AWS-4 licenses, resulting in all 40 MHz of our AWS-4 spectrum being designated for terrestrial downlink operations.

H Block Licenses. On April 29, 2014, the FCC issued an order granting our application to acquire all 176 wireless spectrum licenses in the H Block auction. We paid approximately \$1.672 billion to acquire these H Block licenses, including clearance costs associated with the lower H Block spectrum. The H Block licenses are subject to certain interim and final build-out requirements. By April 2018, we must provide reliable signal coverage and offer service to at least 40% of the population in each area covered by an individual H Block license (the “H Block Interim Build-Out Requirement”). By April 2024, we must provide reliable signal coverage and offer service to at least 75% of the population in each area covered by an individual H Block license (the “H Block Final Build-Out Requirement”). If the H Block Interim Build-Out Requirement is not met, the H Block license term and the H Block Final Build-Out Requirement may be accelerated by two years (from April 2024 to April 2022) for each H Block license area in which we do not meet the requirement. If the H Block Final Build-Out Requirement is not met, our authorization for each H Block license area in which we do not meet the requirement may terminate.

MVDDS Licenses. We have MVDDS licenses in 82 out of 214 geographical license areas, including Los Angeles, New York City, Chicago and several other major metropolitan areas. By August 2014, we were required to meet certain FCC build-out requirements related to our MVDDS licenses, and we are subject to certain FCC service rules applicable to these licenses. In January 2015, the FCC granted our application to extend the build-out requirements related to our MVDDS licenses. We now have until 2019 to provide “substantial service” on our MVDDS licenses, and the licenses expire in 2024. Our MVDDS licenses may be terminated, however, if we do not provide substantial service in accordance with the new build-out requirements.

In 2016, the MVDDS 5G Coalition, of which we are a member, filed a petition for rulemaking requesting the FCC to consider updating the rules to allow us to provide two-way 5G services using our MVDDS licenses. We cannot predict when or if the FCC will grant the petition and proceed with a rulemaking. If the FCC adopts rules that would allow us to provide two-way 5G services using our MVDDS licenses, the requests of OneWeb and others for authority to use the band for service from NGSO satellite systems may hinder our ability to provide 5G services using our MVDDS licenses.

Commercialization of Our Wireless Spectrum Licenses and Related Assets. We have made substantial investments to acquire certain wireless spectrum licenses and related assets. We will need to make significant additional investments or partner with others to, among other things, commercialize, build-out, and integrate these licenses and related assets, and any additional acquired licenses and related assets; and comply with regulations applicable to such licenses. Depending on the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such investments or partnerships could vary significantly. We may also determine that additional wireless spectrum licenses may be required to commercialize our wireless business and to compete with other wireless service providers.

Auction 1000. On February 10, 2016, we filed an application with the FCC to potentially participate as a bidder in the forward auction phase of Auction 1000. The available spectrum in each licensed geographic area in Auction 1000 is generally comprised of certain paired 5x5 spectrum blocks (5 MHz uplink spectrum and 5 MHz downlink spectrum). As a result, a nationwide footprint may be obtained by aggregating a single 5x5 spectrum block in each available licensed geographic area.

Auction 1000 has had multiple stages, with each stage having two phases. With respect to each stage, in the first phase, or reverse auction phase, participating television broadcasters “sell” their rights to use certain broadcast television spectrum in the 600 MHz frequency range to the FCC. Then following the first phase of a stage, in the second phase, or forward auction phase, the FCC will “resell” that spectrum to auction participants. In the event that certain criteria are not met within a particular stage for Auction 1000 to conclude, Auction 1000 then proceeds to a subsequent stage with less available spectrum than the immediately preceding stage and lower spectrum clearing targets.

Before the forward auction phase of Stage 1 of Auction 1000 began, a qualified bidder in the forward auction could make an upfront deposit of up to approximately \$5.4 billion. On July 15, 2016, the FCC announced that a subsidiary of DISH Network and 61 other applicants were qualified to participate in the forward auction. The FCC determined that bidding in Auction 1000 will be “anonymous,” which means that prior to and during the course of the auction, the FCC will not make public any information about a specific applicant’s upfront deposits or its bids. In addition, FCC rules restrict information that applicants may disclose about their participation in Auction 1000.

- *Stage 1:* The reverse auction phase of Stage 1 began on March 29, 2016 and ended on June 29, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 1, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 1 would have had to have exceeded approximately \$88.4 billion. The forward auction phase of Stage 1 included 100 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 1 began on August 16, 2016 and ended on August 30, 2016, but the aggregate bids of approximately \$23.1 billion did not exceed the approximately \$88.4 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 2.
- *Stage 2:* The reverse auction phase of Stage 2 began on September 13, 2016 and ended on October 13, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 2, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 2 would have had to have exceeded approximately \$56.5 billion. The forward auction phase of Stage 2 included 90 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 2 began and ended on October 19, 2016, but the aggregate bids of approximately \$21.5 billion did not exceed the approximately \$56.5 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 3.
- *Stage 3:* The reverse auction phase of Stage 3 began on November 1, 2016 and ended on December 1, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 3, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 3 would have had to have exceeded approximately \$42.3 billion. The forward auction phase of Stage 3 included 80 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 3 began and ended on December 5, 2016, but the aggregate bids of approximately \$19.7 billion did not exceed the approximately \$42.3 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 4.
- *Stage 4:* The reverse auction phase of Stage 4 began on December 13, 2016 and ended on January 13, 2017. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 4, in order for Auction 1000 to ultimately conclude, the aggregate bids in the forward auction phase of Stage 4 would have to exceed approximately \$12.0 billion. The forward auction phase of Stage 4 includes 70 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The clock bidding portion of the forward auction phase of Stage 4 began on January 18, 2017 and ended on February 10, 2017. The aggregate bids of approximately \$19.6 billion exceeded the approximately \$12.0 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to the assignment portion of the forward auction phase in which winning bidders in the clock bidding portion have the opportunity to bid for frequency-specific licenses. The assignment portion is scheduled to begin on March 6, 2017, and all assignment rounds are expected to end no later than March 30, 2017. During the assignment portion, the FCC rules restricting information that forward auction applicants may disclose about their participation in Auction 1000 remain in place. As mentioned above, a subsidiary of DISH Network qualified to participate in the forward auction. To the extent that it is the winning bidder for any 600 MHz licenses, we would expect to pay for such licenses from any upfront deposit made with the FCC and/or existing cash and marketable investment securities balances.

We may need to raise significant additional capital in the future to fund the efforts described above, which may not be available on acceptable terms or at all. There can be no assurance that we will be able to develop and implement a business model that will realize a return on these wireless spectrum licenses or that we will be able to profitably deploy the assets represented by these wireless spectrum licenses, which may affect the carrying amount of these assets and our future financial condition or results of operations.

DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses

Through our wholly-owned subsidiaries American II and American III, we have made over \$10.0 billion in certain non-controlling investments in Northstar Spectrum, the parent company of Northstar Wireless, and in SNR HoldCo, the parent company of SNR Wireless, respectively. Northstar Wireless and SNR Wireless each filed applications with the FCC to participate in Auction 97 (the “AWS-3 Auction”) for the purpose of acquiring certain AWS-3 Licenses. Each of Northstar Wireless and SNR Wireless applied to receive bidding credits of 25% as designated entities under applicable FCC rules. In February 2015, one of our wholly-owned subsidiaries received a refund from the FCC of its \$400 million upfront payment made in 2014 related to the AWS-3 Auction.

Northstar Wireless was the winning bidder for AWS-3 Licenses with gross winning bid amounts totaling approximately \$7.845 billion, which after taking into account a 25% bidding credit, is approximately \$5.884 billion. SNR Wireless was the winning bidder for AWS-3 Licenses with gross winning bid amounts totaling approximately \$5.482 billion, which after taking into account a 25% bidding credit, is approximately \$4.112 billion. In addition to the net winning bids, SNR Wireless made a bid withdrawal payment of approximately \$8 million.

On August 18, 2015, the FCC released a *Memorandum Opinion and Order*, FCC 15-104 (the “Order”) in which the FCC determined, among other things, that DISH Network has a controlling interest in, and is an affiliate of, Northstar Wireless and SNR Wireless, and therefore DISH Network’s revenues should be attributed to them, which in turn makes Northstar Wireless and SNR Wireless ineligible to receive the 25% bidding credits (approximately \$1.961 billion for Northstar Wireless and \$1.370 billion for SNR Wireless) (each a “Bidding Credit Amount” and collectively the “Bidding Credit Amounts”). Each of Northstar Wireless and SNR Wireless has filed a notice of appeal and petition for review of the Order with the United States Court of Appeals for the District of Columbia, challenging, among other things, the FCC’s determination that they are ineligible to receive the Bidding Credit Amounts. Oral arguments were presented to the Court on September 26, 2016. We cannot predict with any degree of certainty the timing or outcome of these proceedings.

On October 1, 2015, DISH Network, American II, American III, Northstar Wireless, SNR Wireless, and certain other entities holding certain interests in Northstar Wireless and SNR Wireless, entered into a series of arrangements with respect to the AWS-3 Licenses, as further described below.

Letters Exchanged between Northstar Wireless and the FCC Wireless Bureau. As outlined in letters exchanged between Northstar Wireless and the Wireless Telecommunications Bureau of the FCC (the “FCC Wireless Bureau”), Northstar Wireless paid the gross winning bid amounts for 261 AWS-3 Licenses (the “Northstar Licenses”) totaling approximately \$5.619 billion through the application of funds already on deposit with the FCC. Northstar Wireless also notified the FCC that it would not be paying the gross winning bid amounts for 84 AWS-3 Licenses totaling approximately \$2.226 billion.

As a result of the nonpayment of those gross winning bid amounts, the FCC retained those licenses and Northstar Wireless owed the FCC an additional interim payment of approximately \$334 million (the “Northstar Interim Payment”), which is equal to 15% of \$2.226 billion. The Northstar Interim Payment was recorded in “FCC auction expense” on our Consolidated Statements of Operations and Comprehensive Income (Loss) for the year ended December 31, 2015. Northstar Wireless immediately satisfied the Northstar Interim Payment through the application of funds already on deposit with the FCC and an additional loan from American II of approximately \$69 million. As a result, the FCC will not deem Northstar Wireless to be a “current defaulter” under applicable FCC rules.

In addition, the FCC Wireless Bureau acknowledged that Northstar Wireless' nonpayment of those gross winning bid amounts does not constitute action involving gross misconduct, misrepresentation or bad faith. Therefore, the FCC concluded that such nonpayment will not affect the eligibility of Northstar Wireless, its investors (including DISH Network) or their respective affiliates to participate in future spectrum auctions (including Auction 1000 and any re-auction of the AWS-3 Licenses retained by the FCC). At this time, DISH Network (through itself, a subsidiary or another entity in which it may hold a direct or indirect interest) expects to participate in any re-auction of those AWS-3 Licenses.

If the winning bids from re-auction or other award of the AWS-3 Licenses retained by the FCC are greater than or equal to the winning bids of Northstar Wireless, no additional amounts will be owed to the FCC. However, if those winning bids are less than the winning bids of Northstar Wireless, then Northstar Wireless will be responsible for the difference less any overpayment of the Northstar Interim Payment (which will be recalculated as 15% of the winning bids from re-auction or other award) (the "Northstar Re-Auction Payment"). For example, if the winning bids in a re-auction are \$1, the Northstar Re-Auction Payment would be approximately \$1.892 billion, which is calculated as the difference between \$2.226 billion (the Northstar winning bid amounts) and \$1 (the winning bids from re-auction) less the resulting \$334 million overpayment of the Northstar Interim Payment. As discussed above, at this time, DISH Network (through itself, a subsidiary or another entity in which it may hold a direct or indirect interest) expects to participate in any re-auction. We cannot predict with any degree of certainty the timing or outcome of any re-auction or the amount of any Northstar Re-Auction Payment.

Amendment to Northstar Wireless Credit Agreement. On October 1, 2015, American II, Northstar Wireless and Northstar Spectrum amended the First Amended and Restated Credit Agreement dated October 13, 2014, by and among American II, as Lender, Northstar Wireless, as Borrower, and Northstar Spectrum, as Guarantor (as amended, the "Northstar Credit Agreement"), to provide, among other things, that: (i) the Northstar Interim Payment and any Northstar Re-Auction Payment will be made by American II directly to the FCC and will be deemed as loans under the Northstar Credit Agreement; (ii) the FCC is a third-party beneficiary with respect to American II's obligation to pay the Northstar Interim Payment and any Northstar Re-Auction Payment; (iii) in the event that the winning bids from re-auction or other award of the AWS-3 Licenses retained by the FCC are less than the winning bids of Northstar Wireless, the purchaser, assignee or transferee of any AWS-3 Licenses from Northstar Wireless is obligated to pay its pro-rata share of the difference (and Northstar Wireless remains jointly and severally liable for such pro-rata share); and (iv) during the period between the due date for the payments guaranteed under the FCC Northstar Guaranty (as discussed below) and the date such guaranteed payments are paid, Northstar Wireless' payment obligations to American II under the Northstar Credit Agreement will be subordinated to such guaranteed payments.

DISH Network Guaranty in Favor of the FCC for Certain Northstar Wireless Obligations. On October 1, 2015, DISH Network entered into a guaranty in favor of the FCC (the "FCC Northstar Guaranty") with respect to the Northstar Interim Payment (which was satisfied on October 1, 2015) and any Northstar Re-Auction Payment. The FCC Northstar Guaranty provides, among other things, that during the period between the due date for the payments guaranteed under the FCC Northstar Guaranty and the date such guaranteed payments are paid: (i) Northstar Wireless' payment obligations to American II under the Northstar Credit Agreement will be subordinated to such guaranteed payments; and (ii) DISH Network or American II will withhold exercising certain rights as a creditor of Northstar Wireless.

Letters Exchanged between SNR Wireless and the FCC Wireless Bureau. As outlined in letters exchanged between SNR Wireless and the FCC Wireless Bureau, SNR Wireless paid the gross winning bid amounts for 244 AWS-3 Licenses (the "SNR Licenses") totaling approximately \$4.271 billion through the application of funds already on deposit with the FCC and a portion of an additional loan from American III in an aggregate amount of approximately \$344 million (which included an additional bid withdrawal payment of approximately \$3 million). SNR Wireless also notified the FCC that it would not be paying the gross winning bid amounts for 113 AWS-3 Licenses totaling approximately \$1.211 billion.

As a result of the nonpayment of those gross winning bid amounts, the FCC retained those licenses and SNR Wireless owed the FCC an additional interim payment of approximately \$182 million (the "SNR Interim Payment"), which is equal to 15% of \$1.211 billion. The SNR Interim Payment was recorded in "FCC auction expense" on our Consolidated Statements of Operations and Comprehensive Income (Loss) for the year ended December 31, 2015. SNR Wireless immediately satisfied the SNR Interim Payment through a portion of an additional loan from American III in an aggregate amount of approximately \$344 million. As a result, the FCC will not deem SNR Wireless to be a "current defaulter" under applicable FCC rules.

In addition, the FCC Wireless Bureau acknowledged that SNR Wireless' nonpayment of those gross winning bid amounts does not constitute action involving gross misconduct, misrepresentation or bad faith. Therefore, the FCC concluded that such nonpayment will not affect the eligibility of SNR Wireless, its investors (including DISH Network) or their respective affiliates to participate in future spectrum auctions (including Auction 1000 and any re-auction of the AWS-3 Licenses retained by the FCC). At this time, DISH Network (through itself, a subsidiary or another entity in which it may hold a direct or indirect interest) expects to participate in any re-auction of those AWS-3 Licenses.

If the winning bids from re-auction or other award of the AWS-3 Licenses retained by the FCC are greater than or equal to the winning bids of SNR Wireless, no additional amounts will be owed to the FCC. However, if those winning bids are less than the winning bids of SNR Wireless, then SNR Wireless will be responsible for the difference less any overpayment of the SNR Interim Payment (which will be recalculated as 15% of the winning bids from re-auction or other award) (the "SNR Re-Auction Payment"). For example, if the winning bids in a re-auction are \$1, the SNR Re-Auction Payment would be approximately \$1.029 billion, which is calculated as the difference between \$1.211 billion (the SNR winning bid amounts) and \$1 (the winning bids from re-auction) less the resulting \$182 million overpayment of the SNR Interim Payment. As discussed above, at this time, DISH Network (through itself, a subsidiary or another entity in which it may hold a direct or indirect interest) expects to participate in any re-auction. We cannot predict with any degree of certainty the timing or outcome of any re-auction or the amount of any SNR Re-Auction Payment.

Amendment to SNR Wireless Credit Agreement. On October 1, 2015, American III, SNR Wireless and SNR HoldCo amended the First Amended and Restated Credit Agreement dated October 13, 2014, by and among American III, as Lender, SNR Wireless, as Borrower, and SNR HoldCo, as Guarantor (as amended, the "SNR Credit Agreement"), to provide, among other things, that: (i) the SNR Interim Payment and any SNR Re-Auction Payment will be made by American III directly to the FCC and will be deemed as loans under the SNR Credit Agreement; (ii) the FCC is a third-party beneficiary with respect to American III's obligation to pay the SNR Interim Payment and any SNR Re-Auction Payment; (iii) in the event that the winning bids from re-auction or other award of the AWS-3 Licenses retained by the FCC are less than the winning bids of SNR Wireless, the purchaser, assignee or transferee of any AWS-3 Licenses from SNR Wireless is obligated to pay its pro-rata share of the difference (and SNR Wireless remains jointly and severally liable for such pro-rata share); and (iv) during the period between the due date for the payments guaranteed under the FCC SNR Guaranty (as discussed below) and the date such guaranteed payments are paid, SNR Wireless' payment obligations to American III under the SNR Credit Agreement will be subordinated to such guaranteed payments.

DISH Network Guaranty in Favor of the FCC for Certain SNR Wireless Obligations. On October 1, 2015, DISH Network entered into a guaranty in favor of the FCC (the "FCC SNR Guaranty") with respect to the SNR Interim Payment (which was satisfied on October 1, 2015) and any SNR Re-Auction Payment. The FCC SNR Guaranty provides, among other things, that during the period between the due date for the payments guaranteed under the FCC SNR Guaranty and the date such guaranteed payments are paid: (i) SNR Wireless' payment obligations to American III under the SNR Credit Agreement will be subordinated to such guaranteed payments; and (ii) DISH Network or American III will withhold exercising certain rights as a creditor of SNR Wireless.

Northstar Wireless is a wholly-owned subsidiary of Northstar Spectrum. Through American II, we own an 85% non-controlling interest in Northstar Spectrum. Northstar Manager, LLC ("Northstar Manager") owns a 15% controlling interest in, and is the sole manager of, Northstar Spectrum. Northstar Spectrum is governed by a limited liability company agreement by and between American II and Northstar Manager (the "Northstar Spectrum LLC Agreement"). Pursuant to the Northstar Spectrum LLC Agreement, American II and Northstar Manager made pro-rata equity contributions in Northstar Spectrum. As of October 1, 2015, the total equity contributions from American II and Northstar Manager to Northstar Spectrum were approximately \$750 million and \$133 million, respectively. As of October 1, 2015, the total loans from American II to Northstar Wireless under the Northstar Credit Agreement for payments to the FCC related to the Northstar Licenses were approximately \$5.070 billion.

SNR Wireless is a wholly-owned subsidiary of SNR HoldCo. Through American III, we own an 85% non-controlling interest in SNR HoldCo. SNR Wireless Management, LLC (“SNR Management”) owns a 15% controlling interest in, and is the sole manager of, SNR HoldCo. SNR HoldCo is governed by a limited liability company agreement by and between American III and SNR Management (the “SNR HoldCo LLC Agreement”). Pursuant to the SNR HoldCo LLC Agreement, American III and SNR Management made pro-rata equity contributions in SNR HoldCo. As of October 1, 2015, the total equity contributions from American III and SNR Management to SNR HoldCo were approximately \$524 million and \$93 million, respectively. As of October 1, 2015, the total loans from American III to SNR Wireless under the SNR Credit Agreement for payments to the FCC related to the SNR Licenses were approximately \$3.847 billion.

After Northstar Wireless and SNR Wireless satisfied their respective payments to the FCC on October 1, 2015 for the Northstar Licenses and the SNR Licenses, and the Northstar Interim Payment and the SNR Interim Payment (which included an additional bid withdrawal payment), our total non-controlling debt and equity investments in the Northstar Entities and the SNR Entities for payments to the FCC related to the AWS-3 Licenses were approximately \$10.191 billion. Under the applicable accounting guidance in ASC 810, Northstar Spectrum and SNR HoldCo are considered variable interest entities and, based on the characteristics of the structure of these entities and in accordance with the applicable accounting guidance, we have consolidated these entities into our financial statements beginning in the fourth quarter 2014. See Note 2 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

On October 27, 2015, the FCC granted the Northstar Licenses to Northstar Wireless and the SNR Licenses to SNR Wireless, respectively, which are recorded in “FCC authorizations” on our Consolidated Balance Sheets. The AWS-3 Licenses are subject to certain interim and final build-out requirements. By October 2021, Northstar Wireless and SNR Wireless must provide reliable signal coverage and offer service to at least 40% of the population in each area covered by an individual AWS-3 License (the “AWS-3 Interim Build-Out Requirement”). By October 2027, Northstar Wireless and SNR Wireless must provide reliable signal coverage and offer service to at least 75% of the population in each area covered by an individual AWS-3 License (the “AWS-3 Final Build-Out Requirement”). If the AWS-3 Interim Build-Out Requirement is not met, the AWS-3 License term and the AWS-3 Final Build-Out Requirement may be accelerated by two years (from October 2027 to October 2025) for each AWS-3 License area in which Northstar Wireless and SNR Wireless do not meet the requirement. If the AWS-3 Final Build-Out Requirement is not met, the authorization for each AWS-3 License area in which Northstar Wireless and SNR Wireless do not meet the requirement may terminate.

In addition, on September 23, 2016, the United States District Court for the District of Columbia unsealed a qui tam complaint that was filed by Vermont National Telephone Company (“Vermont National”) against us; our wholly-owned subsidiaries, American AWS-3 Wireless I L.L.C., American II, American III, and DISH Wireless Holding L.L.C.; Charles W. Ergen (our Chairman and Chief Executive Officer) and Cantey M. Ergen (a member of our board of directors); Northstar Wireless; Northstar Spectrum; Northstar Manager; SNR Wireless; SNR HoldCo; SNR Management; and certain other parties. See “*Contingencies – Litigation – Vermont National Telephone Company*” in Note 14 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

We may need to make significant additional loans to the Northstar Entities and to the SNR Entities, or they may need to partner with others, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate the Northstar Licenses and the SNR Licenses, and comply with regulations applicable to the Northstar Licenses and the SNR Licenses. Depending upon the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such loans or partnerships could vary significantly. We may need to raise significant additional capital in the future, which may not be available on acceptable terms or at all, to make further investments in the Northstar Entities and the SNR Entities. There can be no assurance that we will be able to obtain a profitable return on our non-controlling investments in the Northstar Entities and the SNR Entities. See “*We face certain risks related to our non-controlling investments in the Northstar Entities and the SNR Entities, which may have a material adverse effect on our business, results of operations and financial condition*” below for further information.

Impairment of Assets

Furthermore, the fair values of wireless spectrum licenses and related assets may vary significantly in the future. In particular, valuation swings could occur if:

- consolidation in the wireless industry allows or requires wireless carriers to sell significant portions of their wireless spectrum holdings, which could in turn reduce the value of our spectrum holdings;
- a sale of spectrum by one or more wireless providers occurs;
- the FCC pursues certain policies designed to increase the number of wireless spectrum licenses available in each of our markets; or
- the FCC conducts additional wireless spectrum auctions.

If the fair value of our wireless spectrum licenses were to decline significantly, the value of these licenses could be subject to impairment charges. We assess potential impairments to our indefinite-lived intangible assets annually or more often if indicators of impairment arise to determine whether there is evidence that indicate an impairment condition may exist.

We capitalize our interest expense associated with the acquisition or construction of certain assets, including, among other things, our wireless spectrum licenses. As the carrying amount of these licenses is significant compared to the carrying value of our long-term debt, a substantial portion of our interest expense is capitalized. This capitalized interest increases the carrying amount of these licenses for purposes of impairment testing, under which we consider whether it is more likely than not that the fair value of these licenses exceeds the carrying amount of these licenses. An increase in the carrying amount of these licenses combined with other changes in circumstances and/or market conditions could result in an increased risk of an impairment of these licenses in the future.

We face certain risks related to our non-controlling investments in the Northstar Entities and the SNR Entities, which may have a material adverse effect on our business, results of operations and financial condition.

In addition to the risks described in “*Item 1A. Risk Factors —Acquisition and Capital Structure Risks —We have made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, we have made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses*” in this Annual Report on Form 10-K, we face certain other risks related to our non-controlling investments in the Northstar Entities and the SNR Entities, including, among others, the risks described below. Any of the following risks, among others, may have a material adverse effect on our business, results of operations and financial condition.

On October 27, 2015, the FCC granted the Northstar Licenses to Northstar Wireless and the SNR Licenses to SNR Wireless, respectively. We do not own or control the Northstar Licenses or the SNR Licenses nor do we control the Northstar Entities or the SNR Entities. We do not have a right to require Northstar Manager or SNR Management to sell their respective ownership interests in Northstar Spectrum and SNR Holdco to us. Northstar Manager, as the sole manager of Northstar Spectrum, and SNR Management, as the sole manager of SNR Holdco, will have the exclusive right and power to manage, operate and control Northstar Spectrum and SNR Holdco, respectively, subject to certain limited protective provisions for the benefit of American II and American III, respectively. Northstar Manager and SNR Management will have the ability, but not the obligation, to require Northstar Spectrum and SNR Holdco, respectively, to purchase Northstar Manager’s and SNR Management’s ownership interests in those respective entities after the fifth anniversary of the grant date of the Northstar Licenses and the SNR Licenses (and in certain circumstances prior to the fifth anniversary of the grant date of the Northstar Licenses and the SNR Licenses). Thus, we cannot be certain that the Northstar Licenses or the SNR Licenses will be developed in a manner fully consistent with our current or future business plans.

Each of Northstar Wireless and SNR Wireless applied to receive bidding credits of 25% as designated entities under applicable FCC rules. The FCC implemented rules and policies governing the designated entity program that are intended to ensure that qualifying designated entities are not controlled by operators or investors that do not meet certain qualification tests. Qualification is also subject to challenge in *qui tam* lawsuits filed by private parties alleging that participants have defrauded the government in which the person bringing the suit may share in any recovery by the government. Furthermore, litigation surrounding designated entity structures, increased regulatory scrutiny or third party

or government lawsuits with respect to our non-controlling investments in the Northstar Entities and the SNR Entities could result in fines, and in certain cases, license revocation and/or criminal penalties, which could have a material adverse effect on our business, financial condition or results of operations.

On August 18, 2015, the FCC released the Order in which the FCC determined, among other things, that DISH Network has a controlling interest in, and is an affiliate of, Northstar Wireless and SNR Wireless, and therefore DISH Network's revenues should be attributed to them, which in turn makes Northstar Wireless and SNR Wireless ineligible to receive the Bidding Credit Amounts (approximately \$1.961 billion for Northstar Wireless and \$1.370 billion for SNR Wireless). Each of Northstar Wireless and SNR Wireless has filed a notice of appeal and petition for review of the Order with the United States Court of Appeals for the District of Columbia, challenging, among other things, the FCC's determination that they are ineligible to receive the Bidding Credit Amounts. Oral arguments were presented to the Court on September 26, 2016. We cannot predict with any degree of certainty the timing or outcome of these proceedings. See *"We have made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, we have made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses"* above for further information.

In addition, on September 23, 2016, the United States District Court for the District of Columbia unsealed a qui tam complaint that was filed by Vermont National against us; our wholly-owned subsidiaries, American AWS-3 Wireless I L.L.C., American II, American III, and DISH Wireless Holding L.L.C.; Charles W. Ergen (our Chairman and Chief Executive Officer) and Canteley M. Ergen (a member of our board of directors); Northstar Wireless; Northstar Spectrum; Northstar Manager; SNR Wireless; SNR HoldCo; SNR Management; and certain other parties. See *"Contingencies – Litigation – Vermont National Telephone Company"* in Note 14 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

We may need to make significant additional loans to the Northstar Entities and the SNR Entities, or they may need to partner with others, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate the Northstar Licenses and the SNR Licenses, and comply with regulations applicable to the Northstar Licenses and the SNR Licenses. Depending upon the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such loans or partnerships could vary significantly. We may need to raise significant additional capital in the future, which may not be available on acceptable terms or at all, to make further investments in the Northstar Entities and the SNR Entities. There can be no assurance that we will be able to obtain a profitable return on our non-controlling investments in the Northstar Entities and the SNR Entities.

To the extent that we commercialize our wireless spectrum licenses, we will face certain risks entering and competing in the wireless services industry and operating a wireless services business.

We have made substantial investments to acquire certain wireless spectrum licenses and related assets. We will need to make significant additional investments or partner with others to, among other things, commercialize, build-out, and integrate these licenses and related assets, and any additional acquired licenses and related assets; and comply with regulations applicable to such licenses. Depending on the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such investments or partnerships could vary significantly. We may also determine that additional wireless spectrum licenses may be required to commercialize our wireless business and to compete with other wireless service providers. For example, on February 10, 2016, we filed an application with the FCC to potentially participate as a forward auction bidder in Auction 1000. On July 15, 2016, the FCC announced that a subsidiary of DISH Network and 61 other applicants were qualified to participate in the forward auction. The FCC determined that bidding in Auction 1000 will be "anonymous," which means that prior to and during the course of the auction, the FCC will not make public any information about a specific applicant's upfront deposits or its bids. In addition, FCC rules restrict information that applicants may disclose about their participation in Auction 1000. See *"We have made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, we have made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses"* above for further information. We may need to raise significant additional capital in the future to fund the efforts described above, which may not be available on acceptable terms or at all. There can be no assurance that we will be able to develop and implement a business model that will realize a return on these wireless spectrum licenses or that we will be able to profitably deploy the assets represented by these wireless spectrum licenses, which may affect the carrying amount of these assets and our future financial condition or results of operations.

To the extent we commercialize our wireless spectrum licenses and enter the wireless services industry, a wireless services business presents certain risks. Any of the following risks, among others, may have a material adverse effect on our future business, results of operations and financial condition

The wireless services industry is competitive. We have limited experience in the wireless services industry, which is a competitive industry, with increasing customer demands for data services that require increasing capital resources to maintain a robust network. The wireless services industry has incumbent and established competitors such as Verizon, AT&T, T-Mobile USA Inc. (“T-Mobile”) and Sprint Corporation (“Sprint”), with substantial market share. Some of these companies have greater financial, marketing and other resources than us, and have existing cost and operational advantages that we lack. Market saturation is expected to continue to cause the wireless services industry’s customer growth rate to moderate in comparison to historical growth rates, leading to increased competition for customers. As the industry matures, competitors increasingly must seek to attract a greater proportion of new subscribers from each other’s existing subscriber bases rather than from first-time purchasers of wireless services. Furthermore, the cost of attracting a new customer is generally higher than the cost associated with retaining an existing customer. In addition, we may face increasing competition from wireless telecommunications providers who offer mobile video offerings. Wireless mobile video offerings have become more prevalent in the marketplace as wireless telecommunications providers have expanded the fourth generation of wireless communications. In July 2015, AT&T completed its acquisition of DirecTV, our direct competitor and the largest satellite TV provider in the U.S., which has recently launched an OTT service, DirecTV Now, that competes directly with our Sling branded pay-TV services. As a result of this acquisition, DirecTV, among other things, has increased access to capital, access to AT&T’s nationwide platform for wireless mobile video, and the ability to more seamlessly bundle its video services with AT&T’s broadband Internet access and wireless services. The combined company may be able to, among other things, pressure third-party content owners and programmers to withhold online rights from us; utilize its increased leverage over third-party content owners and programmers to reduce the price it pays for programming at the expense of other MVPDs, including us; thwart our entry into the wireless market, by, among other things, refusing to enter into data roaming agreements with us; foreclose or degrade our online video offerings at various points in the broadband pipe; and impose data caps on consumers who access our online video offerings. In addition, in October 2016, AT&T announced its pending acquisition of Time Warner. If the proposed transaction ultimately is completed, the addition of Time Warner’s media holdings, which include content, such as HBO, TBS, TNT, CNN, and movies, would, among other things, provide the combined company increased scale and leverage in the converging video, mobile, and broadband industries. For example, AT&T’s current zero rating practice may give an unfair advantage to AT&T’s own video content, which currently includes, among others, DirecTV services on mobile devices.

- ***Our ability to compete effectively would be dependent on a number of factors.*** Our ability to compete effectively would depend on, among other things, our network quality, capacity and coverage; the pricing of our products and services; the quality of customer service; our development of new and enhanced products and services; the reach and quality of our sales and distribution channels; our ability to predict and adapt to future changes in technologies and changes in consumer demands; and capital resources. It would also depend on how successfully we anticipate and respond to various competitive factors affecting the industry, including, among others, new technologies and business models, products and services that may be introduced by competitors, changes in consumer preferences, the demand for and usage of data, video and other voice and non-voice services, demographic trends, economic conditions, and discount pricing and other strategies that may be implemented by competitors. It may be difficult for us to differentiate our products and services from other competitors in the industry, which may limit our ability to attract customers. Our success also may depend on our ability to access and deploy adequate spectrum, deploy new technologies and offer attractive services to customers. For example, we may not be able to obtain and offer certain technologies or features that are subject to competitor patents or other exclusive arrangements.

- ***We would depend on third parties to provide us with infrastructure and products and services.*** We would depend on various key suppliers and vendors to provide us, directly or through other suppliers, with infrastructure, equipment and services, such as switch and network equipment, handsets and other devices and equipment that we would need in order to operate a wireless services business and provide products and services to our customers. For example, handset and other device suppliers often rely on one vendor for the manufacture and supply of critical components, such as chipsets, used in their devices. If these suppliers or vendors fail to provide equipment or services on a timely basis or fail to meet performance expectations, we may be unable to provide products and services as and when expected by our customers. Any difficulties experienced with these suppliers and vendors could result in additional expense and/or delays in introducing our wireless services. Our efforts would involve significant expense and require strategic management decisions on, and timely implementation of, equipment choices, network deployment and management, and service offerings. In addition, these suppliers and vendors may also be subject to litigation with respect to technology on which we would depend, including litigation involving claims of patent infringement.
- ***Wireless services and our wireless spectrum licenses are subject to government regulation.*** Wireless services and our wireless spectrum licenses are subject to regulation by the FCC and other federal, state and local, as well as international, governmental authorities. These governmental authorities could adopt regulations or take other actions that would adversely affect our business prospects, making it more difficult and/or expensive to commercialize our wireless spectrum licenses or acquire additional licenses. The licensing, construction, operation, sale and interconnection arrangements of wireless telecommunications systems are regulated by the FCC and, depending on the jurisdiction, other federal and international, state and local regulatory agencies. In particular, the FCC imposes significant regulation on licensees of wireless spectrum with respect to how radio spectrum is used by licensees, the nature of the services that licensees may offer and how the services may be offered, and resolution of issues of interference between spectrum bands. The FCC grants wireless licenses for terms of generally ten years that are subject to renewal or revocation. There can be no assurances that our wireless spectrum licenses will be renewed or that we will be able to obtain additional licenses. Failure to comply with FCC requirements in a given license area could result in revocation of the license for that license area. In addition, the FCC uses its transactional “spectrum screen” to identify prospective wireless transactions that may require additional competitive scrutiny. If a proposed transaction would exceed the spectrum screen threshold, the FCC undertakes a more detailed analysis of relevant market conditions in the impacted geographic areas to determine whether the transaction would reduce competition without offsetting public benefits. If a proposed spectrum acquisition exceeds the spectrum screen trigger such additional review could extend the duration of the regulatory review process and there can be no assurance that such proposed spectrum acquisition would ultimately be completed in whole or in part. For further information related to our wireless spectrum licenses, including build-out requirements, see other Risk Factors above.

We may pursue acquisitions and other strategic transactions to complement or expand our business that may not be successful, and we may lose up to the entire value of our investment in these acquisitions and transactions.

Our future success may depend on opportunities to buy other businesses or technologies that could complement, enhance or expand our current businesses or products or that might otherwise offer us growth opportunities. To pursue this strategy successfully, we must identify attractive acquisition or investment opportunities and successfully complete transactions, some of which may be large and complex. We may not be able to identify or complete attractive acquisition or investment opportunities due to, among other things, the intense competition for these transactions. If we are not able to identify and complete such acquisition or investment opportunities, our future results of operations and financial condition may be adversely affected.

We may be unable to obtain in the anticipated timeframe, or at all, any regulatory approvals required to complete proposed acquisitions and other strategic transactions. Furthermore, the conditions imposed for obtaining any necessary approvals could delay the completion of such transactions for a significant period of time or prevent them from occurring at all. We may not be able to complete such transactions and such transactions, if executed, pose significant risks and

could have a negative effect on our operations. Any transactions that we are able to identify and complete may involve a number of risks, including:

- the diversion of our management's attention from our existing businesses to integrate the operations and personnel of the acquired or combined business or joint venture;
- possible adverse effects on our operating results during the integration process;
- a high degree of risk inherent in these transactions, which could become substantial over time, and higher exposure to significant financial losses if the underlying ventures are not successful;
- our possible inability to achieve the intended objectives of the transaction; and
- the risks associated with complying with regulations applicable to the acquired business, which may cause us to incur substantial expenses.

In addition, we may not be able to successfully or profitably integrate, operate, maintain and manage our newly acquired operations or employees. We may not be able to maintain uniform standards, controls, procedures and policies, and this may lead to operational inefficiencies. In addition, the integration process may strain our financial and managerial controls and reporting systems and procedures.

New acquisitions, joint ventures and other transactions may require the commitment of significant capital that would otherwise be directed to investments in our existing business. To pursue acquisitions and other strategic transactions, we may need to raise additional capital in the future, which may not be available on acceptable terms or at all.

In addition to committing capital to complete the acquisitions, substantial capital may be required to operate the acquired businesses following their acquisition. These acquisitions may result in significant financial losses if the intended objectives of the transactions are not achieved. Some of the businesses acquired by us have experienced significant operating and financial challenges in their recent history, which in some cases resulted in these businesses commencing bankruptcy proceedings prior to our acquisition. We may acquire similar businesses in the future. There is no assurance that we will be able to successfully address the challenges and risks encountered by these businesses following their acquisition. If we are unable to successfully address these challenges and risks, our business, financial condition and/or results of operations may suffer.

We may need additional capital, which may not be available on acceptable terms or at all, to continue investing in our business and to finance acquisitions and other strategic transactions.

We may need to raise significant additional capital in the future, which may not be available on acceptable terms or at all, to among other things, continue investing in our business, construct and launch new satellites, and to pursue acquisitions and other strategic transactions. Weakness in the equity markets could make it difficult for us to raise equity financing without incurring substantial dilution to our existing shareholders. Adverse changes in the credit markets, including rising interest rates, could increase our borrowing costs and/or make it more difficult for us to obtain financing for our operations or refinance existing indebtedness. In addition, economic weakness or weak results of operations may limit our ability to generate sufficient internal cash to fund investments, capital expenditures, acquisitions and other strategic transactions, as well as to fund ongoing operations and service our debt. Furthermore, our borrowing costs can be affected by short and long-term debt ratings assigned by independent rating agencies, which are based, in significant part, on our performance as measured by their credit metrics. A decrease in these ratings would likely increase our cost of borrowing and/or make it more difficult for us to obtain financing. A severe disruption in the global financial markets could impact some of the financial institutions with which we do business, and such instability could also affect our access to financing. As a result, these conditions make it difficult for us to accurately forecast and plan future business activities because we may not have access to funding sources necessary for us to pursue organic and strategic business development opportunities.

See “*We have made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, we have made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses*” above for further information.

We have substantial debt outstanding and may incur additional debt.

As of December 31, 2016, our total long-term debt and capital lease obligations, including the debt of our subsidiaries, was \$16.479 billion. Our debt levels could have significant consequences, including:

- making it more difficult to satisfy our obligations;
- a dilutive effect on our outstanding equity capital or future earnings;
- increasing our vulnerability to general adverse economic conditions, including changes in interest rates;
- requiring us to devote a substantial portion of our cash to make interest and principal payments on our debt, thereby reducing the amount of cash available for other purposes. As a result, we would have limited financial and operating flexibility in responding to changing economic and competitive conditions;
- limiting our ability to raise additional debt because it may be more difficult for us to obtain debt financing on attractive terms; and
- placing us at a disadvantage compared to our competitors that are less leveraged.

In addition, we may incur substantial additional debt in the future. The terms of the indentures relating to our senior notes permit us to incur additional debt. If new debt is added to our current debt levels, the risks we now face could intensify.

The conditional conversion features of our 3 3/8% Convertible Notes due 2026, if triggered, may adversely affect our financial condition.

In the event the conditional conversion features of the Convertible Notes due 2026 are triggered, holders of the Convertible Notes due 2026 will be entitled to convert the Convertible Notes due 2026 at any time during specified periods at their option. If one or more holders elect to convert their Convertible Notes due 2026, unless we elect to satisfy our conversion obligation by delivering solely shares of our Class A common stock, we would be required to make cash payments to satisfy all or a portion of our conversion obligation based on the conversion rate, which could adversely affect our liquidity. In addition, even if holders do not elect to convert their Convertible Notes due 2026, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the Convertible Notes due 2026 as a current rather than long-term liability, which could result in a material reduction of our net working capital.

The convertible note hedge and warrant transactions that we entered into in connection with the offering of the Convertible Notes due 2026 may affect the value of the Convertible Notes due 2026 and our Class A common stock.

In connection with the offering of the Convertible Notes due 2026, we entered into convertible note hedge transactions with certain option counterparties (each an “option counterparty”). The convertible note hedge transactions are expected generally to reduce the potential dilution upon conversion of the Convertible Notes due 2026 and/or offset any cash payments we are required to make in excess of the principal amount of converted Convertible Notes due 2026, as the case may be. We also entered into warrant transactions with each option counterparty. The warrant transactions could separately have a dilutive effect on our Class A common stock to the extent that the market price per share of our Class A common stock exceeds the strike price of the warrants, unless we elect to settle the warrants in cash. In connection with establishing its initial hedge of the convertible note hedge and warrant transactions, each option counterparty or an affiliate thereof may have entered into various derivative transactions with respect to our Class A common stock concurrently with or shortly after the pricing of the Convertible Notes due 2026. This activity could increase (or reduce the size of any decrease in) the market price of our Class A common stock or the Convertible Notes due 2026 at that time. In addition, each option counterparty or an affiliate thereof may modify its hedge position by entering into or unwinding various derivatives with respect to our Class A common stock and/or purchasing or selling our Class A common stock or other securities of ours in secondary market transactions prior to the maturity of the Convertible Notes due 2026 (and is likely to do so during any observation period related to a conversion of the Convertible Notes due 2026). This activity could also cause or avoid an increase or a decrease in the market price of our Class A common stock or the Convertible Notes due 2026. In addition, if any such convertible note hedge and warrant transactions fail to become effective, each option counterparty may unwind its hedge position with respect to our Class A common stock, which could adversely affect the value of our Class A common stock and the value of the Convertible Notes due 2026.

We are subject to counterparty risk with respect to the convertible note hedge transactions.

Each option counterparty to the convertible note hedge transactions is a financial institution, and we will be subject to the risk that it might default under the convertible note hedge transaction. Our exposure to the credit risk of an option counterparty will not be secured by any collateral. Global economic conditions have from time to time resulted in the actual or perceived failure or financial difficulties of many financial institutions, including the bankruptcy filing by Lehman Brothers Holdings Inc. and its various affiliates. If an option counterparty becomes subject to insolvency proceedings, we will become an unsecured creditor in those proceedings with a claim equal to our exposure at that time under our transactions with the option counterparty. Our exposure will depend on many factors but, generally, the increase in our exposure will be correlated to the increase in the market price and in the volatility of our Class A common stock. In addition, upon a default by an option counterparty, we may suffer adverse tax consequences and more dilution than we currently anticipate with respect to our Class A common stock. We can provide no assurances as to the financial stability or viability of any option counterparty.

From time to time a portion of our investment portfolio may be invested in securities that have limited liquidity and may not be immediately accessible to support our financing needs, including investments in public companies that are highly speculative and have experienced and continue to experience volatility.

From time to time a portion of our investment portfolio may be invested in strategic investments, and as a result, a portion of our portfolio may have restricted liquidity. If the credit ratings of these securities deteriorate or there is a lack of liquidity in the marketplace, we may be required to record impairment charges. Moreover, the uncertainty of domestic and global financial markets can greatly affect the volatility and value of our marketable investment securities. In addition, a portion of our investment portfolio may include strategic and financial investments in debt and equity securities of public companies that are highly speculative and experience volatility. Typically, these investments are concentrated in a small number of companies. The fair value of these investments can be significantly impacted by the risk of adverse changes in securities markets generally, as well as risks related to the performance of the companies whose securities we have invested in, risks associated with specific industries, and other factors. These investments are subject to significant fluctuations in fair value due to the volatility of the securities markets and of the underlying businesses. The concentration of these investments as a percentage of our overall investment portfolio fluctuates from time to time based on, among other things, the size of our investment portfolio and our ability to liquidate these investments. In addition, because our portfolio may be concentrated in a limited number of companies, we may experience a significant loss if any of these companies, among other things, defaults on its obligations, performs poorly, does not generate adequate cash flow to fund its operations, is unable to obtain necessary financing on acceptable terms, or at all, or files for bankruptcy, or if the sectors in which these companies operate experience a market downturn. To the extent we require access to funds, we may need to sell these securities under unfavorable market conditions, record impairment charges and fall short of our financing needs.

It may be difficult for a third party to acquire us, even if doing so may be beneficial to our shareholders, because of our ownership structure.

Certain provisions of our articles of incorporation and bylaws may discourage, delay or prevent a change in control of our company that a shareholder may consider favorable. These provisions include the following:

- a capital structure with multiple classes of common stock: a Class A that entitles the holders to one vote per share, a Class B that entitles the holders to ten votes per share, a Class C that entitles the holders to one vote per share, except upon a change in control of our company in which case the holders of Class C are entitled to ten votes per share;
- a provision that authorizes the issuance of “blank check” preferred stock, which could be issued by our Board of Directors to increase the number of outstanding shares and thwart a takeover attempt;
- a provision limiting who may call special meetings of shareholders; and
- a provision establishing advance notice requirements for nominations of candidates for election to our Board of Directors or for proposing matters that can be acted upon by shareholders at shareholder meetings.

As discussed below, Charles W. Ergen, our Chairman and Chief Executive Officer, controls approximately 78.5% of the total voting power of our company. Such control by Mr. Ergen may make it impractical for any third party to effect a change in control of our company. In addition, pursuant to our articles of incorporation we have a significant amount of authorized and unissued stock which would allow our Board of Directors to issue shares to persons friendly to current management, thereby protecting the continuity of its management, or which could be used to dilute the stock ownership of persons seeking to obtain control of us.

We are controlled by one principal stockholder who is also our Chairman and Chief Executive Officer.

Charles W. Ergen, our Chairman and Chief Executive Officer, owns approximately 44.7% of our total equity securities (assuming conversion of all Class B Common Stock into Class A Common Stock) and beneficially owns approximately 48.1% of our total equity securities (assuming conversion of only the Class B Common Stock held by Mr. Ergen into Class A Common Stock). Under either a beneficial or equity calculation method, Mr. Ergen controls approximately 78.5% of the total voting power. Mr. Ergen's beneficial ownership of shares of Class A Common Stock excludes 33,790,620 shares of Class A Common Stock issuable upon conversion of shares of Class B Common Stock currently held by certain trusts established by Mr. Ergen for the benefit of his family. These trusts own approximately 7.3% of our total equity securities (assuming conversion of all Class B Common Stock into Class A Common Stock) and beneficially own approximately 13.0% of our total equity securities (assuming conversion of only the Class B Common Stock held by such trusts into Class A Common Stock). Under either a beneficial or equity calculation method, these trusts possess approximately 12.9% of the total voting power. Through his voting power, Mr. Ergen has the ability to elect a majority of our directors and to control all other matters requiring the approval of our stockholders. As a result, DISH Network is a "controlled company" as defined in the Nasdaq listing rules and is, therefore, not subject to Nasdaq requirements that would otherwise require us to have: (i) a majority of independent directors; (ii) a nominating committee composed solely of independent directors; (iii) compensation of our executive officers determined by a majority of the independent directors or a compensation committee composed solely of independent directors; and (iv) director nominees selected, or recommended for the Board's selection, either by a majority of the independent directors or a nominating committee composed solely of independent directors. Mr. Ergen is also the principal stockholder and Chairman of EchoStar.

Legal and Regulatory Risks

A ruling in the Do Not Call litigation requiring us to pay substantial civil penalties and/or damages and/or enjoining us, whether acting directly or indirectly through authorized telemarketers or independent third-party retailers, from certain activities could have a material adverse effect on our results of operations, financial condition and cash flow.

On March 25, 2009, our wholly-owned subsidiary DISH Network L.L.C. was sued in a civil action by the United States Attorney General and several states in the United States District Court for the Central District of Illinois (the "FTC Action"), alleging violations of the Telephone Consumer Protection Act ("TCPA") and the Telemarketing Sales Rule ("TSR"), as well as analogous state statutes and state consumer protection laws. The plaintiffs allege that we, directly and through certain independent third-party retailers and their affiliates, committed certain telemarketing violations. On December 23, 2013, the plaintiffs filed a motion for summary judgment, which indicated for the first time that the state plaintiffs were seeking civil penalties and damages of approximately \$270 million and that the federal plaintiff was seeking an unspecified amount of civil penalties (which could substantially exceed the civil penalties and damages being sought by the state plaintiffs). The plaintiffs were also seeking injunctive relief that if granted would, among other things, enjoin DISH Network L.L.C., whether acting directly or indirectly through authorized telemarketers or independent third-party retailers, from placing any outbound telemarketing calls to market or promote its goods or services for five years, and enjoin DISH Network L.L.C. from accepting activations or sales from certain existing independent third-party retailers and from certain new independent third-party retailers, except under certain circumstances. We also filed a motion for summary judgment, seeking dismissal of all claims. On December 12, 2014, the Court issued its opinion with respect to the parties' summary judgment motions. The Court found that DISH Network L.L.C. is entitled to partial summary judgment with respect to one claim in the action. In addition, the Court found that the plaintiffs are entitled to partial summary judgment with respect to ten claims in the action, which includes, among other things, findings by the Court establishing DISH Network L.L.C.'s liability for a substantial amount of the alleged outbound telemarketing calls by DISH Network L.L.C. and certain of its independent third-party retailers that were the subject of the plaintiffs' motion. The Court did not issue any injunctive relief and did not make any determination on civil penalties or damages, ruling instead that the scope of any injunctive relief and the amount of any civil penalties or damages are questions for trial.

In pre-trial disclosures, the federal plaintiff indicated that it intended to seek up to \$900 million in alleged civil penalties, and the state plaintiffs indicated that they intended to seek as much as \$23.5 billion in alleged civil penalties and damages. The plaintiffs also modified their request for injunctive relief. Their requested injunction, if granted, would enjoin DISH Network L.L.C. from placing outbound telemarketing calls unless and until: (i) DISH Network L.L.C. hires a third-party consulting organization to perform a review of its call center operations; (ii) such third-party consulting organization submits a telemarketing compliance plan to the Court and the federal plaintiff; (iii) the Court holds a hearing on the adequacy of the plan; (iv) if the Court approves the plan, DISH Network L.L.C. implements the plan and verifies to the Court that it has implemented the plan; and (v) the Court issues an order permitting DISH Network L.L.C. to resume placing outbound telemarketing calls. The plaintiffs' modified request for injunctive relief, if granted, would also enjoin DISH Network L.L.C. from accepting customer orders solicited by certain independent third-party retailers unless and until a similar third-party review and Court approval process was followed with respect to the telemarketing activities of its independent third-party retailer base to ensure compliance with the TSR.

The first phase of the bench trial took place January 19, 2016 through February 11, 2016. In closing briefs, the federal plaintiff indicated that it still is seeking \$900 million in alleged civil penalties; the California state plaintiff indicated that it is seeking \$100 million in alleged civil penalties and damages for its state law claims (in addition to any amounts sought on its federal law claims); the Ohio state plaintiff indicated that it is seeking approximately \$10 million in alleged civil penalties and damages for its state law claims (in addition to any amounts sought on its federal law claims); and the Illinois and North Carolina state plaintiffs did not state the specific alleged civil penalties and damages that they are seeking; but the state plaintiffs have taken the general position that any damages award less than \$1.0 billion (presumably for both federal and state law claims) would not raise constitutional concerns. Under the Eighth Amendment of the U.S. Constitution, excessive fines may not be imposed.

On October 3, 2016, the plaintiffs further modified their request for injunctive relief and are now seeking, among other things, to enjoin DISH Network L.L.C., whether acting directly or indirectly through authorized telemarketers or independent third-party retailers, from placing any outbound telemarketing calls to market or promote its goods or services for five years, and enjoin DISH Network L.L.C. from accepting activations or sales from some or all existing independent third-party retailers. The second phase of the bench trial, which commenced on October 25, 2016 and concluded on November 2, 2016, covered the plaintiffs' requested injunctive relief, as well as certain evidence related to the state plaintiffs' claims.

We may also from time to time be subject to private civil litigation alleging telemarketing violations. For example, a portion of the alleged telemarketing violations by an independent third-party retailer at issue in the FTC Action are also the subject of a certified class action filed against DISH Network L.L.C. in the United States District Court for the Middle District of North Carolina (the "Krakauer Action"). Following a five-day trial, on January 19, 2017, a jury in that case found that the independent third-party retailer was acting as DISH Network L.L.C.'s agent when it made the 51,119 calls at issue in that case, and that class members are eligible to recover \$400 in damages for each call made in violation of the TCPA. The plaintiff is also seeking enhanced damages under the TCPA for alleged willful or knowing violations. The Court will decide whether there were any willful or knowing violations, and the Court has discretion to increase the damages by up to three times for any such violations. The plaintiffs in the FTC Action have asserted that the jury verdict in the Krakauer Action preclusively establishes that the independent third-party retailer at issue in the Krakauer Action was acting as DISH Network L.L.C.'s agent when it made the calls at issue in the FTC Action, and is otherwise persuasive evidence that the other independent third-party retailers at issue in the FTC Action were acting as DISH Network's L.L.C.'s agents when they made their respective calls at issue in the FTC Action, that the alleged civil penalties being sought by the federal and state plaintiffs are reasonable, and that the calls made by DISH Network L.L.C. and independent third-party retailers at issue in the FTC Action were made to landline residential phones. We have opposed those assertions.

A ruling requiring us to pay substantial civil penalties and/or damages and/or enjoining us, whether acting directly or indirectly through authorized telemarketers or independent third-party retailers, from the activities described above could have a material adverse effect on our results of operations, financial condition and cash flow.

Our business depends on certain intellectual property rights and on not infringing the intellectual property rights of others.

We rely on our patents, copyrights, trademarks and trade secrets, as well as licenses and other agreements with our vendors and other parties, to use our technologies, conduct our operations and sell our products and services. Legal challenges to our intellectual property rights and claims of intellectual property infringement by third parties could require that we enter into royalty or licensing agreements on unfavorable terms, incur substantial monetary liability or be enjoined preliminarily or permanently from further use of the intellectual property in question or from the continuation of our business as currently conducted, which could require us to change our business practices or limit our ability to compete effectively or could have an adverse effect on our results of operations. Even if we believe any such challenges or claims are without merit, they can be time-consuming and costly to defend and divert management's attention and resources away from our business. Moreover, because of the rapid pace of technological change, we rely on technologies developed or licensed by third parties, and if we are unable to obtain or continue to obtain licenses from these third parties on reasonable terms, our business, financial condition and results of operations could be adversely affected.

In addition, we work with third parties such as vendors, contractors and suppliers for the development and manufacture of components that are integrated into our products and services, and our products and services may contain technologies provided to us by these third parties or other third parties. We may have little or no ability to determine in advance whether any such technology infringes the intellectual property rights of others. Our vendors, contractors and suppliers may not be required to indemnify us if a claim of infringement is asserted against us, or they may be required to indemnify us only up to a maximum amount, above which we would be responsible for any further costs or damages. Legal challenges to these intellectual property rights may impair our ability to use the products, services and technologies that we need in order to operate our business and may materially and adversely affect our business, financial condition and results of operations. Furthermore, our digital content offerings depend in part on effective digital rights management technology to control access to digital content. If the digital rights management technology that we use is compromised or otherwise malfunctions, content providers may be unwilling to provide access to their content. Changes in the copyright laws or how such laws may be interpreted could impact our ability to deliver content and provide certain features and functionality, particularly over the Internet.

We are, and may become, party to various lawsuits which, if adversely decided, could have a significant adverse impact on our business, particularly lawsuits regarding intellectual property.

We are, and may become, subject to various legal proceedings and claims which arise in the ordinary course of business, including among other things, disputes with programmers regarding fees. Many entities, including some of our competitors, have or may in the future obtain patents and other intellectual property rights that may cover or affect products or services related to those that we offer. In general, if a court determines that one or more of our products or services infringes on intellectual property held by others, we may be required to cease developing or marketing those products or services, to obtain licenses from the holders of the intellectual property at a material cost, or to redesign those products or services in such a way as to avoid infringing the intellectual property. If those intellectual property rights are held by a competitor, we may be unable to obtain the intellectual property at any price, which could adversely affect our competitive position. See "Item 1. Business — Patents and Other Intellectual Property" of this Annual Report on Form 10-K for further information.

We may not be aware of all intellectual property rights that our services or the products used in connection with our services may potentially infringe. In addition, patent applications in the United States are confidential until the Patent and Trademark Office either publishes the application or issues a patent (whichever arises first). Therefore, it is difficult to evaluate the extent to which our services or the products used in connection with our services may infringe claims contained in pending patent applications. Further, it is sometimes not possible to determine definitively whether a claim of infringement is valid.

Our ability to distribute video content via the Internet, including our Sling TV services, involves regulatory risk.

Certain of our programming agreements allow us to, among other things, deliver certain authenticated content via the Internet and/or deliver certain content through our Sling TV services, and we are increasingly distributing video content to our subscribers via the Internet and through our Sling TV services. The ability to continue this strategy may depend in

part on the FCC's success in implementing rules prohibiting fixed and mobile broadband access providers, among other things, from blocking or throttling traffic, from paid privatization, and from unreasonably interfering with, or disadvantaging, consumers' or content providers' access to the Internet.

See "Item 1. Business — Government Regulations — FCC Regulations Governing our Pay-TV Operations — Open Internet" of this Annual Report on Form 10-K for further information.

Changes in the Cable Act, and/or the rules of the FCC that implement the Cable Act, may limit our ability to access programming from cable-affiliated programmers at nondiscriminatory rates.

We purchase a large percentage of our programming from cable-affiliated programmers. Pursuant to the Cable Act, cable providers had been prohibited from entering into exclusive contracts with cable-affiliated programmers. The Cable Act directed that this prohibition expire after a certain period of time unless the FCC determined that the prohibition continued to be necessary. In October 2012, the FCC allowed this prohibition to expire. While the FCC has issued a Further Notice of Proposed Rulemaking aimed at serving some of the same objectives as the prohibition, there can be no assurances that such protections will be adopted or be as effective as the prohibition if they are adopted. In the event that this decision is reconsidered by the FCC or reviewed by a court of appeals, we cannot predict the timing or outcome of any subsequent FCC decision.

As a result of the expiration of this prohibition on exclusivity, we may be limited in our ability to obtain access at all, or on nondiscriminatory terms, to programming from programmers that are affiliated with cable system operators. In addition, any other changes in the Cable Act, and/or the FCC's rules that implement the Cable Act, that currently limit the ability of cable-affiliated programmers to discriminate against competing businesses such as ours, could adversely affect our ability to acquire cable-affiliated programming at all or to acquire programming on nondiscriminatory terms.

Furthermore, the FCC had imposed program access conditions on certain cable companies as a result of mergers, consolidations or affiliations with programmers. The expiration of the exclusivity prohibition in the Cable Act triggered the termination of certain program access conditions that the FCC had imposed on Liberty. In July 2012, similar program access conditions that had applied to Time Warner Cable, which was acquired by Charter in 2016, expired as previously scheduled. These developments may adversely affect our ability to obtain Liberty's and Charter's programming, or to obtain it on nondiscriminatory terms. In the case of certain types of programming affiliated with Comcast through its control of NBCUniversal, the prohibition on exclusivity is set to expire in January 2018, and we will not be able to rely on these protections beyond that date. Until that time, we have the right to subject the terms of access to NBCUniversal's programming to binding arbitration if we and the programmer cannot reach agreement on terms, subject to FCC review. There can be no assurance that this procedure will result in favorable terms for us.

In addition, affiliates of certain cable providers have denied us access to sports programming that they distribute to their cable systems terrestrially, rather than by satellite. The FCC has held that new denials of such service are unfair if they have the purpose or effect of significantly hindering us from providing programming to consumers. However, we cannot be certain that we can prevail in a complaint related to such programming and gain access to it. Our continuing failure to access such programming could materially and adversely affect our ability to compete in regions serviced by these cable providers.

The injunction against our retransmission of distant networks, which is currently waived, may be reinstated.

Pursuant to STELA, we obtained a waiver of a court injunction that previously prevented us from retransmitting certain distant network signals under a statutory copyright license. Because of that waiver, we may provide distant network signals to eligible subscribers. To qualify for that waiver, we are required to provide local service in all 210 local markets in the U.S. on an ongoing basis. This condition poses a significant strain on our capacity. Moreover, we may lose that waiver if we are found to have failed to provide local service in any of the 210 local markets. If we lose the waiver, the injunction could be reinstated. Furthermore, depending on the severity of the failure, we may also be subject to other sanctions, which may include, among other things, damages.

We are subject to significant regulatory oversight, and changes in applicable regulatory requirements, including any adoption or modification of laws or regulations relating to the Internet, could adversely affect our business.

Our operations, particularly our DBS operations and our wireless spectrum licenses, are subject to significant government regulation and oversight, primarily by the FCC and, to a certain extent, by Congress, other federal agencies

and foreign, state and local authorities. Depending upon the circumstances, noncompliance with legislation or regulations promulgated by these authorities could result in the limitations on, or suspension or revocation of, our licenses or registrations, the termination or loss of contracts or the imposition of contractual damages, civil fines or criminal penalties, any of which could have a material adverse effect on our business, financial condition and results of operations. Furthermore, the recent change in the Administration and any government policy changes it may institute, which may be substantial, could increase regulatory uncertainty. The adoption or modification of laws or regulations relating to video programming, satellite services, wireless telecommunications, broadband, the Internet or other areas of our business could limit or otherwise adversely affect the manner in which we currently conduct our business, including our Sling TV services. In addition, the manner in which regulations or legislation in these areas, including the FCC's Open Internet rules, may be interpreted and enforced cannot be precisely determined, which in turn could have an adverse effect on our business, financial condition and results of operations. See regulatory disclosures under the caption "*Item 1. Business — Government Regulations*" of this Annual Report on Form 10-K for additional information.

Our business depends on FCC licenses that can expire or be revoked or modified and applications for FCC licenses that may not be granted.

If the FCC were to cancel, revoke, suspend, restrict, significantly condition, or fail to renew any of our licenses or authorizations, or fail to grant our applications for FCC licenses that we may file from time to time, it could have a material adverse effect on our business, financial condition and results of operations. Specifically, loss of a frequency authorization would reduce the amount of spectrum available to us, potentially reducing the amount of services available to our DISH branded pay-TV subscribers. The materiality of such a loss of authorizations would vary based upon, among other things, the location of the frequency used or the availability of replacement spectrum. In addition, Congress often considers and enacts legislation that affects us and FCC proceedings to implement the Communications Act and enforce its regulations are ongoing. We cannot predict the outcomes of these legislative or regulatory proceedings or their effect on our business.

We are subject to digital HD "carry-one, carry-all" requirements that cause capacity constraints.

To provide any full-power local broadcast signal in any market, we are required to retransmit all qualifying broadcast signals in that market ("carry-one, carry-all"), including the carriage of full-power broadcasters' HD signals in markets in which we elect to provide local channels in HD. The carriage of additional HD signals on our DISH branded pay-TV service could cause us to experience significant capacity constraints and prevent us from carrying additional popular national channels and/or carrying those national channels in HD.

Our business, investor confidence in our financial results and stock price may be adversely affected if our internal controls are not effective.

We periodically evaluate and test our internal control over financial reporting to satisfy the requirements of Section 404 of the Sarbanes-Oxley Act. Our management has concluded that our internal control over financial reporting was effective as of December 31, 2016. If in the future we are unable to report that our internal control over financial reporting is effective (or if our auditors do not agree with our assessment of the effectiveness of, or are unable to express an opinion on, our internal control over financial reporting), investors, customers and business partners could lose confidence in the accuracy of our financial reports, which could in turn have a material adverse effect on our business, investor confidence in our financial results may weaken, and our stock price may suffer.

We may face other risks described from time to time in periodic and current reports we file with the SEC.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

The following table sets forth certain information concerning our principal properties related to our business segments.

Description/Use/Location	Segment(s) Using Property	Owned	Leased From	
			EchoStar (1)	Other Third Party
Corporate headquarters, Englewood, Colorado	Pay-TV and Broadband/ Wireless		X	
Customer call center and general offices, Roseland, New Jersey	Pay-TV and Broadband			X
Customer call center, Alvin, Texas	Pay-TV and Broadband			X
Customer call center, Bluefield, West Virginia	Pay-TV and Broadband	X		
Customer call center, Christiansburg, Virginia	Pay-TV and Broadband	X		
Customer call center, College Point, New York	Pay-TV and Broadband			X
Customer call center, Harlingen, Texas	Pay-TV and Broadband	X		
Customer call center, Hilliard, Ohio	Pay-TV and Broadband			X
Customer call center, Littleton, Colorado	Pay-TV and Broadband		X	
Customer call center, Phoenix, Arizona	Pay-TV and Broadband			X
Customer call center, Thornton, Colorado	Pay-TV and Broadband	X		
Customer call center, Tulsa, Oklahoma	Pay-TV and Broadband			X
Customer call center, warehouse, service, and remanufacturing center, El Paso, Texas	Pay-TV and Broadband	X		
Service and remanufacturing center, Spartanburg, South Carolina	Pay-TV and Broadband			X
Warehouse and distribution center, Denver, Colorado	Pay-TV and Broadband			X
Warehouse and distribution center, Sacramento, California	Pay-TV and Broadband	X		
Warehouse and distribution center, Atlanta, Georgia	Pay-TV and Broadband			X
Warehouse, Denver, Colorado	Pay-TV and Broadband	X		

- (1) See Note 18 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on our Related Party Transactions with EchoStar.

In addition to the principal properties listed above, we operate numerous facilities for, among other things, our in-home service operations strategically located in regions throughout the United States. Furthermore, we own or lease capacity on 13 satellites, which are a major component of our DISH branded pay-TV service. See further information under “Item 1. Business — Satellites” in this Annual Report on Form 10-K.

Item 3. LEGAL PROCEEDINGS

See Note 14 “Commitments and Contingencies - Litigation” in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for information regarding certain legal proceedings in which we are involved.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Price of and Dividends on the Registrant's Common Equity and Related Stockholder Matters

Market Information. Our Class A common stock is quoted on the Nasdaq Global Select Market under the symbol "DISH." The high and low closing sale prices of our Class A common stock during 2016 and 2015 on the Nasdaq Global Select Market (as reported by Nasdaq) are set forth below.

2016	High	Low
First Quarter	\$ 57.35	\$ 39.71
Second Quarter	56.06	43.40
Third Quarter	55.04	48.84
Fourth Quarter	59.93	53.97
2015	High	Low
First Quarter	\$ 78.31	\$ 68.46
Second Quarter	75.51	65.92
Third Quarter	69.25	56.36
Fourth Quarter	65.07	57.16

As of February 13, 2017, there were approximately 7,272 holders of record of our Class A common stock, not including stockholders who beneficially own Class A common stock held in nominee or street name. As of February 13, 2017, 204,644,588 of the 238,435,208 outstanding shares of our Class B common stock were beneficially held by Charles W. Ergen, our Chairman and Chief Executive Officer, and the remaining 33,790,620 were held in trusts established by Mr. Ergen for the benefit of his family. There is currently no trading market for our Class B common stock.

Dividends. While we currently do not intend to declare dividends on our common stock, we may elect to do so from time to time. Payment of any future dividends will depend upon our earnings and capital requirements, restrictions in our debt facilities, and other factors the Board of Directors considers appropriate. We currently intend to retain our earnings, if any, to support future growth and expansion, although we may repurchase shares of our common stock from time to time. See further information under "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources" in this Annual Report on Form 10-K.

Securities Authorized for Issuance Under Equity Compensation Plans. See "Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters" in this Annual Report on Form 10-K.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

The following table provides information regarding purchases of our Class A common stock made by us for the period from October 1, 2016 through December 31, 2016.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Approximate Dollar Value of Shares that May Yet be Purchased Under the Plans or Programs (1)
(In thousands, except share data)				
October 1, 2016 - October 31, 2016	—	\$ —	—	\$ 1,000,000
November 1, 2016 - November 30, 2016	—	\$ —	—	\$ 1,000,000
December 1, 2016 - December 31, 2016	—	\$ —	—	\$ 1,000,000
Total	—	\$ —	—	\$ 1,000,000

- (1) Our Board of Directors previously authorized stock repurchases of up to \$1.0 billion of our outstanding Class A common stock through and including December 31, 2016. On November 2, 2016, our Board of Directors extended this authorization such that we are currently authorized to repurchase up to \$1.0 billion of our outstanding Class A common stock through and including December 31, 2017. Purchases under our repurchase program may be made through open market purchases, privately negotiated transactions, or Rule 10b5-1 trading plans, subject to market conditions and other factors. We may elect not to purchase the maximum amount of shares allowable under this program and we may also enter into additional share repurchase programs authorized by our Board of Directors.

Item 6. SELECTED FINANCIAL DATA

The selected consolidated financial data as of and for each of the five years ended December 31, 2016 have been derived from, and are qualified by reference to our consolidated financial statements. On April 26, 2011, we completed the acquisition of most of the assets of Blockbuster, Inc. As of December 31, 2013, Blockbuster had ceased material operations. On January 14, 2014, we completed the sale of our Blockbuster operations in Mexico. The results of Blockbuster are presented for all periods as discontinued operations in our consolidated financial statements. See Note 2 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for additional information regarding our discontinued operations.

Certain prior year amounts have been reclassified to conform to the current year presentation. See further information under “*Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations — Explanation of Key Metrics and Other Items*” in this Annual Report on Form 10-K.

This data should be read in conjunction with our consolidated financial statements and related notes thereto for the three years ended December 31, 2016, and “*Management’s Discussion and Analysis of Financial Condition and Results of Operations*” included elsewhere in this Annual Report on Form 10-K.

Balance Sheet Data	As of December 31,				
	2016	2015	2014	2013	2012
	(In thousands)				
Cash, cash equivalents and current marketable investment securities	\$ 5,359,341	\$ 1,611,069	\$ 9,236,241	\$ 9,739,404	\$ 7,205,379
Total assets	28,091,847	22,886,710	22,045,541	20,192,117	17,229,902
Long-term debt and capital lease obligations (including current portion)	16,478,900	13,755,925	14,427,526	13,597,237	11,831,745
Total stockholders’ equity (deficit)	4,634,893	2,747,787	2,012,134	997,005	71,628

Statements of Operations Data	For the Years Ended December 31,				
	2016	2015	2014	2013	2012
	(In thousands, except per share amounts)				
Total revenue	\$ 15,094,562	\$ 15,068,901	\$ 14,643,387	\$ 13,904,865	\$ 13,181,334
Total costs and expenses	12,883,453	13,736,505	12,818,936	12,556,686	11,922,976
Operating income (loss)	\$ 2,211,109	\$ 1,332,396	\$ 1,824,451	\$ 1,348,179	\$ 1,258,358
Income (loss) from continuing operations	\$ 1,469,454	\$ 769,276	\$ 928,902	\$ 837,089	\$ 662,919
Net income (loss) attributable to DISH Network	\$ 1,449,853	\$ 747,092	\$ 944,693	\$ 807,492	\$ 636,687
Basic net income (loss) per share from continuing operations attributable to DISH Network	\$ 3.12	\$ 1.61	\$ 2.05	\$ 1.87	\$ 1.49
Basic net income (loss) per share from discontinued operations	—	—	—	(0.10)	(0.08)
Basic net income (loss) per share attributable to DISH Network	\$ 3.12	\$ 1.61	\$ 2.05	\$ 1.77	\$ 1.41
Diluted net income (loss) per share from continuing operations attributable to DISH Network	\$ 3.05	\$ 1.61	\$ 2.04	\$ 1.86	\$ 1.49
Diluted net income (loss) per share from discontinued operations	—	—	—	(0.10)	(0.08)
Diluted net income (loss) per share attributable to DISH Network	\$ 3.05	\$ 1.61	\$ 2.04	\$ 1.76	\$ 1.41
Cash dividend per common share	\$ —	\$ —	\$ —	\$ —	\$ 1.00

Other Data (Unaudited except for net cash flows)	For the Years Ended December 31,				
	2016	2015	2014	2013	2012
Pay-TV subscribers, as of period end (in millions)	13.671 *	13.897	13.978	14.057	14.056
Pay-TV subscriber additions, gross (in millions)	2.614	2.773	2.601	2.666	2.739
Pay-TV subscriber additions (losses), net (in millions)	(0.392)	(0.081)	(0.079)	0.001	0.089
Pay-TV average monthly subscriber churn rate	1.83 %	1.71 %	1.59 %	1.58 %	1.57 %
Pay-TV average subscriber acquisition cost per subscriber (“Pay-TV SAC”)	\$ 643	\$ 723	\$ 853	\$ 866	\$ 784
Pay-TV average monthly revenue per subscriber (“Pay-TV ARPU”)	\$ 88.66	\$ 86.79	\$ 83.77	\$ 80.37	\$ 76.98
Broadband subscribers, as of period end (in millions)	0.580	0.623	0.577	0.436	0.183
Broadband subscriber additions, gross (in millions)	0.170	0.237	0.295	0.343	0.121
Broadband subscriber additions (losses), net (in millions)	(0.043)	0.046	0.141	0.253	0.078
Net cash flows from (in thousands):					
Operating activities from continuing operations	\$ 2,802,152	\$ 2,436,080	\$ 2,378,124	\$ 2,309,197	\$ 2,003,718
Investing activities from continuing operations	\$ (1,728,664)	\$ (8,074,149)	\$ (963,077)	\$ (3,034,857)	\$ (3,004,082)
Financing activities from continuing operations	\$ 3,197,079	\$ (413,269)	\$ 980,267	\$ 1,851,940	\$ 4,003,933

* Our ending Pay-TV subscriber count increased by approximately 166,000 subscribers during the third quarter 2016 as a result of the change in our calculation for our commercial accounts. See “Explanation of Key Metrics and Other Items – Pay-TV subscribers” for further information.

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following management's discussion and analysis of our financial condition and results of operations together with the audited consolidated financial statements and notes to our financial statements included elsewhere in this Annual Report on Form 10-K. This management's discussion and analysis is intended to help provide an understanding of our financial condition, changes in financial condition and results of our operations and contains forward-looking statements that involve risks and uncertainties. The forward-looking statements are not historical facts, but rather are based on current expectations, estimates, assumptions and projections about our industry, business and future financial results. Our actual results could differ materially from the results contemplated by these forward-looking statements due to a number of factors, including those discussed under the caption "Item 1A. Risk Factors" and elsewhere in this Annual Report on Form 10-K. Furthermore, such forward-looking statements speak only as of the date of this Annual Report on Form 10-K and we expressly disclaim any obligation to update any forward-looking statements.

Overview

Our business strategy is to be the best provider of video services in the United States by providing products with the best technology, outstanding customer service, and great value. We promote our Pay-TV services as providing our subscribers with a better "price-to-value" relationship than those available from other subscription television service providers.

As the pay-TV industry is mature, our strategy has included an increased emphasis on acquiring and retaining higher quality subscribers, even if it means that we will acquire and retain fewer overall subscribers. We evaluate the quality of subscribers based upon a number of factors, including, among others, profitability. Our Pay-TV subscriber base has been declining due to, among other things, this strategy. There can be no assurance that our Pay-TV subscriber base will not continue to decline.

Our current revenue and profit is primarily derived from providing Pay-TV and broadband services to our subscribers. We also generate revenue from equipment rental fees and other hardware related fees, including fees for DVRs, fees for broadband equipment, equipment upgrade fees and additional outlet fees from subscribers with receivers with multiple tuners; advertising services; and fees earned from our in-home service operations. Our most significant expenses are subscriber-related expenses, which are primarily related to programming, subscriber acquisition costs and depreciation and amortization.

Financial Highlights

2016 Consolidated Results of Operations and Key Operating Metrics

- Revenue of \$15.095 billion
- Pay-TV ARPU of \$88.66
- Net income attributable to DISH Network of \$1.450 billion and basic and diluted earnings per share of common stock of \$3.12 and \$3.05, respectively.
- Gross new Pay-TV subscriber activations of approximately 2.614 million
- Pay-TV SAC of \$643
- Loss of approximately 392,000 net Pay-TV subscribers
- Pay-TV churn rate of 1.83%
- Loss of approximately 43,000 net broadband subscribers

Consolidated Financial Condition as of December 31, 2016

- Cash, cash equivalents and current marketable investment securities of \$5.359 billion
- Total assets of \$28.092 billion
- Total long-term debt and capital lease obligations of \$16.479 billion

Business Segments

We currently operate two primary business segments: (1) Pay-TV and Broadband and (2) Wireless.

Pay-TV and Broadband

We offer Pay-TV services under the DISH brand and the Sling brand. We had 13.671 million Pay-TV subscribers in the United States as of December 31, 2016 and are the nation's fourth largest pay-TV provider. Competition has intensified in recent years as the pay-TV industry has matured. To differentiate our DISH branded pay-TV service from our competitors, we introduced the Hopper whole-home DVR during 2012 and have continued to add functionality and simplicity for a more intuitive user experience. Our Hopper and Joey[®] whole-home DVR promotes a suite of integrated features and functionality designed to maximize the convenience and ease of watching TV anytime and anywhere. It also has several innovative features that a consumer can use, at his or her option, to watch and record television programming, through their televisions, Internet-connected tablets, smartphones and computers. During the first quarter 2016, we made our next generation Hopper, the Hopper 3, available to customers nationwide. Among other things, the Hopper 3 features 16 tuners, delivers an enhanced 4K Ultra HD experience, and supports up to seven TVs simultaneously. There can be no assurance that these integrated features and functionality will positively affect our results of operations or our gross new Pay-TV subscriber activations.

We market our Sling TV services primarily to consumers who do not subscribe to traditional satellite and cable pay-TV services. Our Sling TV services require an Internet connection and are available on multiple streaming-capable devices including TVs, tablets, computers, game consoles and smart phones. We offer Sling International, Sling Latino and Sling domestic video programming services. In addition to our original Sling domestic service that could only be streamed on one device at a time (single-stream service), in April 2016, we launched a live beta multi-stream Sling domestic service, which includes, among other things, the ability to stream on up to three devices simultaneously. In June 2016, our multi-stream Sling domestic service transitioned from its introductory beta period and was re-branded as Sling Blue and our original single-stream Sling domestic service was re-branded as Sling Orange. All Sling branded pay-TV subscribers are included in our Pay-TV subscriber count.

In addition, we bundle broadband and telephone services with our DISH branded pay-TV services. As of December 31, 2016, we had 0.580 million broadband subscribers in the United States. Connecting our subscribers' receivers to broadband service enhances the video experience and can be used by consumers to access DISH branded programming services on mobile devices. We market our wireline and satellite broadband services under the dishNET brand. Our dishNET satellite broadband service utilizes advanced technology and high-powered satellites launched by Hughes and ViaSat to provide broadband coverage nationwide. This service primarily targets rural residents that are underserved, or unserved, by wireline broadband, and provides download speeds of up to 15 Mbps and our dishNET branded wireline broadband service provides download speeds of up to 40 Mbps. Currently, satellite capacity constraints limit our ability to expand services in certain geographic areas. However, new satellite launches by Hughes and ViaSat are expected to provide additional capacity in 2017. EchoStar XIX, a Hughes satellite, was launched on December 18, 2016.

Wireless

DISH Network Spectrum

We have invested over \$5.0 billion since 2008 to acquire certain wireless spectrum licenses and related assets. We will need to make significant additional investments or partner with others to, among other things, commercialize, build-out, and integrate these licenses and related assets, and any additional acquired licenses and related assets; and comply with regulations applicable to such licenses. Depending on the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such investments or partnerships could vary significantly. In addition, as we consider our options for the commercialization of our wireless spectrum, we may incur significant additional expenses and may have to make significant investments related to, among other things, research and development, wireless testing and wireless network infrastructure. We may also determine that additional wireless spectrum licenses may be required to commercialize our wireless business and to compete with other wireless service providers.

Auction 1000. On February 10, 2016, we filed an application with the FCC to potentially participate as a bidder in the forward auction phase of Auction 1000. The available spectrum in each licensed geographic area in Auction 1000 is generally comprised of certain paired 5x5 spectrum blocks (5 MHz uplink spectrum and 5 MHz downlink spectrum). As a result, a nationwide footprint may be obtained by aggregating a single 5x5 spectrum block in each available licensed geographic area.

Auction 1000 has had multiple stages, with each stage having two phases. With respect to each stage, in the first phase, or reverse auction phase, participating television broadcasters “sell” their rights to use certain broadcast television spectrum in the 600 MHz frequency range to the FCC. Then following the first phase of a stage, in the second phase, or forward auction phase, the FCC will “resell” that spectrum to auction participants. In the event that certain criteria are not met within a particular stage for Auction 1000 to conclude, Auction 1000 then proceeds to a subsequent stage with less available spectrum than the immediately preceding stage and lower spectrum clearing targets.

Before the forward auction phase of Stage 1 of Auction 1000 began, a qualified bidder in the forward auction could make an upfront deposit of up to approximately \$5.4 billion. On July 15, 2016, the FCC announced that a subsidiary of DISH Network and 61 other applicants were qualified to participate in the forward auction. The FCC determined that bidding in Auction 1000 will be “anonymous,” which means that prior to and during the course of the auction, the FCC will not make public any information about a specific applicant’s upfront deposits or its bids. In addition, FCC rules restrict information that applicants may disclose about their participation in Auction 1000.

- *Stage 1:* The reverse auction phase of Stage 1 began on March 29, 2016 and ended on June 29, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 1, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 1 would have had to have exceeded approximately \$88.4 billion. The forward auction phase of Stage 1 included 100 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 1 began on August 16, 2016 and ended on August 30, 2016, but the aggregate bids of approximately \$23.1 billion did not exceed the approximately \$88.4 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 2.
- *Stage 2:* The reverse auction phase of Stage 2 began on September 13, 2016 and ended on October 13, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 2, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 2 would have had to have exceeded approximately \$56.5 billion. The forward auction phase of Stage 2 included 90 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 2 began and ended on October 19, 2016, but the aggregate bids of approximately \$21.5 billion did not exceed the approximately \$56.5 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 3.
- *Stage 3:* The reverse auction phase of Stage 3 began on November 1, 2016 and ended on December 1, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 3, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 3 would have had to have exceeded approximately \$42.3 billion. The forward auction phase of Stage 3 included 80 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 3 began and ended on December 5, 2016, but the aggregate bids of approximately \$19.7 billion did not exceed the approximately \$42.3 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 4.

- Stage 4: The reverse auction phase of Stage 4 began on December 13, 2016 and ended on January 13, 2017. Pursuant to the FCC's procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 4, in order for Auction 1000 to ultimately conclude, the aggregate bids in the forward auction phase of Stage 4 would have to exceed approximately \$12.0 billion. The forward auction phase of Stage 4 includes 70 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters' indicated availability of spectrum in the reverse auction phase. The clock bidding portion of the forward auction phase of Stage 4 began on January 18, 2017 and ended on February 10, 2017. The aggregate bids of approximately \$19.6 billion exceeded the approximately \$12.0 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to the assignment portion of the forward auction phase in which winning bidders in the clock bidding portion have the opportunity to bid for frequency-specific licenses. The assignment portion is scheduled to begin on March 6, 2017, and all assignment rounds are expected to end no later than March 30, 2017. During the assignment portion, the FCC rules restricting information that forward auction applicants may disclose about their participation in Auction 1000 remain in place. As mentioned above, a subsidiary of DISH Network qualified to participate in the forward auction. To the extent that it is the winning bidder for any 600 MHz licenses, we would expect to pay for such licenses from any upfront deposit made with the FCC and/or existing cash and marketable investment securities balances.

See Note 14 "*Commitments and Contingencies — Wireless — DISH Network Spectrum*" in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses

Through our wholly-owned subsidiaries American II and American III, we have made over \$10.0 billion in certain non-controlling investments in Northstar Spectrum, the parent company of Northstar Wireless, and in SNR HoldCo, the parent company of SNR Wireless, respectively. On October 27, 2015, the FCC granted the Northstar Licenses to Northstar Wireless and the SNR Licenses to SNR Wireless, respectively, which are recorded in "FCC authorizations" on our Consolidated Balance Sheets. Under the applicable accounting guidance in ASC 810, Northstar Spectrum and SNR HoldCo are considered variable interest entities and, based on the characteristics of the structure of these entities and in accordance with the applicable accounting guidance, we have consolidated these entities into our financial statements beginning in the fourth quarter 2014. See Note 2 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information. The AWS-3 Licenses are subject to certain interim and final build-out requirements. We may need to make significant additional loans to the Northstar Entities and to the SNR Entities, or they may need to partner with others, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate the Northstar Licenses and the SNR Licenses, and comply with regulations applicable to the Northstar Licenses and the SNR Licenses. Depending upon the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such loans or partnerships could vary significantly. See Note 14 "*Commitments and Contingencies — Wireless — DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses*" in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

We may need to raise significant additional capital in the future to fund the efforts described above, which may not be available on acceptable terms or at all. There can be no assurance that we, the Northstar Entities and/or the SNR Entities will be able to develop and implement business models that will realize a return on these wireless spectrum licenses or that we, the Northstar Entities and/or the SNR Entities will be able to profitably deploy the assets represented by these wireless spectrum licenses, which may affect the carrying amount of these assets and our future financial condition or results of operations. See Note 14 "*Commitments and Contingencies — Wireless*" in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Trends in our Pay-TV and Broadband Segment

Competition

Competition has intensified in recent years as the pay-TV industry has matured. With respect to our DISH branded pay-TV services, we and our competitors increasingly must seek to attract a greater proportion of new subscribers from each other's existing subscriber bases rather than from first-time purchasers of pay-TV services. Some of our competitors have been especially aggressive by offering discounted programming and services for both new and existing subscribers, including bundled offers combining broadband, video and/or wireless services and other promotional offers. In some cases, certain competitors have been able to potentially subsidize the price of video services with the price of broadband and/or wireless services. We incur significant costs to retain our existing DISH branded pay-TV customers, mostly as a result of upgrading their equipment to HD and DVR receivers and by providing retention credits. Our subscriber retention costs may vary significantly from period to period. Our Pay-TV services also face increased competition from programmers and other companies who distribute video directly to consumers over the Internet. Programming offered over the Internet has become more prevalent and consumers are spending an increasing amount of time accessing video content via the Internet on their mobile devices. Significant changes in consumer behavior with regard to the means by which consumers obtain video entertainment and information in response to digital media competition could have a material adverse effect on our business, results of operations and financial condition or otherwise disrupt our business. In particular, consumers have shown increased interest in viewing certain video programming in any place, at any time and/or on any broadband-connected device they choose. Online content providers may cause our subscribers to disconnect our services ("cord cutting"), downgrade to smaller, less expensive programming packages ("cord shaving") or elect to purchase through these online content providers a certain portion of the services that they would have historically purchased from us, such as pay per view movies, resulting in less revenue to us.

We implement new marketing promotions from time to time that are intended to increase our gross new Pay-TV subscriber activations. During 2015 and early 2016, we launched various marketing promotions offering certain DISH branded pay-TV programming packages without a price increase for a limited time period. During the third quarter 2016, we launched our Flex Pack skinny bundle with a core package of programming consisting of more than 50 channels and the choice of one of eight themed add-on channel packs, which include local broadcast networks and kids, national and regional sports and general entertainment programming. Subscribers can also add or remove additional channel packs to best suit their entertainment needs. During 2017, we launched "Tuned In To You" and the accompanying "Spokeslistener" campaign. While we plan to implement these and other new marketing efforts, there can be no assurance that we will ultimately be successful in increasing our gross new Pay-TV subscriber activations. Additionally, in response to our efforts, we may face increased competitive pressures, including aggressive marketing, more aggressive retention efforts, bundled discount offers combining broadband, video and/or wireless services and other discounted promotional offers.

In addition, our gross new Pay-TV subscriber activations, net Pay-TV subscriber additions and Pay-TV churn rate continue to be negatively impacted by stricter customer acquisition and retention policies for our DISH branded pay-TV subscribers, including an increased emphasis on acquiring and retaining higher quality subscribers, as well as increased competitive pressures, including aggressive marketing, more aggressive retention efforts, bundled discount offers combining broadband, video and/or wireless services and other discounted promotional offers.

Our Pay-TV subscriber base has been declining due to, among other things, the factors described above. There can be no assurance that our Pay-TV subscriber base will not continue to decline. In the event that our Pay-TV subscriber base continues to decline, it could have a material adverse long-term effect on our business, results of operations, financial condition and cash flow.

Programming

Our ability to compete successfully will depend, among other things, on our ability to continue to obtain desirable programming and deliver it to our subscribers at competitive prices. Programming costs represent a large percentage of our “Subscriber-related expenses” and the largest component of our total expense. We expect these costs to continue to increase, and certain programming costs are rising at a much faster rate than wages or inflation, especially for local broadcast channels. The rates we are charged for retransmitting local broadcast channels have been increasing substantially and may exceed our ability to increase our prices to our customers. In addition, programming costs continue to increase due to contractual price increases and the renewal of long-term programming contracts on less favorable pricing terms. Going forward, our margins may face pressure if we are unable to renew our long-term programming contracts on acceptable pricing and other economic terms or if we are unable to pass these increased programming costs on to our customers.

Increases in programming costs generally cause us to increase the rates that we charge to our subscribers, which could in turn cause our existing Pay-TV subscribers to disconnect our service or cause potential new Pay-TV subscribers to choose not to subscribe to our service. Additionally, even if our subscribers do not disconnect our services, they may purchase through new and existing online content providers a certain portion of the services that they would have historically purchased from us, such as pay-per-view movies, resulting in less revenue to us.

Furthermore, our gross new Pay-TV subscriber activations, net Pay-TV subscriber additions and Pay-TV churn rate may be negatively impacted if we are unable to renew our long-term programming carriage contracts before they expire. In the past, our gross new Pay-TV subscriber activations, net Pay-TV subscriber additions and Pay-TV churn rate have been negatively impacted as a result of programming interruptions and threatened programming interruptions in connection with the scheduled expiration of programming contracts with content providers, including, among others, Tribune Broadcasting Company (“Tribune”) during the second and third quarters of 2016. We cannot predict with any certainty the impact to our gross new Pay-TV subscriber activations, net Pay-TV subscriber additions and Pay-TV churn rate resulting from similar programming interruptions or threatened programming interruptions that may occur in the future. As a result, we may at times suffer from periods of lower gross new Pay-TV subscriber activations, lower net Pay-TV subscriber additions or higher net Pay-TV subscriber losses, and higher Pay-TV churn rates.

Operations and Customer Service

While competitive factors have impacted the entire pay-TV industry, our relative performance has also been driven by issues specific to us. In the past, our subscriber growth has been adversely affected by signal theft and other forms of fraud and by our operational inefficiencies. To combat signal theft and improve the security of our broadcast system, we use microchips embedded in credit card sized access cards, called “smart cards,” or security chips in our DBS receiver systems to control access to authorized programming content (“Security Access Devices”). We expect that future replacements of these devices may be necessary to keep our system secure. To combat other forms of fraud, among other things, we monitor our independent third-party distributors’ and independent third-party retailers’ adherence to our business rules.

While we have made improvements in responding to and dealing with customer service issues, we continue to focus on the prevention of these issues, which is critical to our business, financial condition and results of operations. To improve our operational performance, we continue to make investments in staffing, training, information systems, and other initiatives, primarily in our call center and in-home service operations. These investments are intended to help combat inefficiencies introduced by the increasing complexity of our business, improve customer satisfaction, reduce churn, increase productivity, and allow us to scale better over the long run. We cannot be certain, however, that our spending will ultimately be successful in improving our operational performance.

Changes in our Technology

We have been deploying DBS receivers that utilize 8PSK modulation technology with MPEG-4 compression technology for several years. These technologies, when fully deployed, will allow improved broadcast efficiency, and therefore allow increased programming capacity. Many of our customers today, however, do not have DBS receivers that use MPEG-4 compression technology. In addition, given that all of our HD content is broadcast in MPEG-4, any growth in HD penetration will naturally accelerate our transition to these newer technologies and may increase our subscriber acquisition and retention costs. All new DBS receivers that we purchase from EchoStar have MPEG-4 compression with 8PSK modulation technology. In addition, from time to time, we change equipment for certain subscribers to make more efficient use of transponder capacity in support of HD and other initiatives. We believe that the benefit from the increase in available transponder capacity outweighs the short-term cost of these equipment changes.

Share Exchange Agreement

On January 31, 2017, we and our indirect wholly-owned subsidiaries DNLLC and DOLLC, entered into the Share Exchange Agreement with EchoStar, EB Holdco, EB Splitco, ET Splitco, and ETLLC. Pursuant to the Share Exchange Agreement, among other things: (i) EchoStar will complete the steps necessary for certain assets and liabilities of the Transferred Businesses to be transferred to EB Splitco and ET Splitco; and (ii) EchoStar will transfer to us 100% of the equity of EB Splitco and ET Splitco, and in exchange, we will transfer the EchoStar Tracking Stock to EchoStar and the HSSC Tracking Stock to HSSC. The financial results related to the Share Exchange Agreement are not included in our consolidated financial statements for all periods presented as the closing of the Transaction is subject to various conditions and is not expected to close prior to February 28, 2017. See Note 18 to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

EXPLANATION OF KEY METRICS AND OTHER ITEMS

Subscriber-related revenue. “Subscriber-related revenue” consists principally of revenue from basic, premium movie, local, HD programming, pay-per-view, Latino and international subscriptions; broadband services; equipment rental fees and other hardware related fees, including fees for DVRs, fees for broadband equipment, equipment upgrade fees and additional outlet fees; advertising services; fees earned from our in-home service operations and other subscriber revenue. Certain of the amounts included in “Subscriber-related revenue” are not recurring on a monthly basis.

Equipment sales and other revenue. “Equipment sales and other revenue” principally includes the non-subsidized sales of DBS accessories to independent third-party retailers and other independent third-party distributors of our equipment and revenue from equipment sales and other agreements with EchoStar.

Subscriber-related expenses. “Subscriber-related expenses” principally include programming expenses, which represent a substantial majority of these expenses. “Subscriber-related expenses” also include costs for Pay-TV and broadband services incurred in connection with our in-home service and call center operations, billing costs, refurbishment and repair costs related to DBS receiver systems and broadband equipment, subscriber retention, other variable subscriber expenses and monthly wholesale fees paid to broadband providers.

Satellite and transmission expenses. “Satellite and transmission expenses” includes the cost of leasing satellite and transponder capacity from EchoStar and the cost of digital broadcast operations provided to us by EchoStar, including satellite uplinking/downlinking, signal processing, conditional access management, telemetry, tracking and control, and other professional services. “Satellite and transmission expenses” also includes executory costs associated with capital leases and costs associated with transponder leases and other related services. In addition, “Satellite and transmission expenses” includes costs associated with our Sling TV services including, among other things, streaming delivery technology and infrastructure.

Cost of sales - equipment and other. “Cost of sales - equipment and other” primarily includes the cost of non-subsidized sales of DBS accessories to independent third-party retailers and other independent third-party distributors of our equipment and costs related to equipment sales and other agreements with EchoStar.

Subscriber acquisition costs. While we primarily lease DBS receiver systems and Broadband modem equipment, we also subsidize certain costs to attract new subscribers. Our “Subscriber acquisition costs” include the cost of subsidized sales of DBS receiver systems to independent third-party retailers and other independent third-party distributors of our equipment, the cost of subsidized sales of DBS receiver systems directly by us to subscribers, including net costs related to our promotional incentives, costs related to our direct sales efforts and costs related to installation and acquisition advertising. Our “Subscriber acquisition costs” also includes costs associated with acquiring Sling branded pay-TV subscribers including, among other things, costs related to acquisition advertising, our direct sales efforts and commissions.

Pay-TV SAC. Subscriber acquisition cost measures are commonly used by those evaluating companies in the pay-TV industry. We are not aware of any uniform standards for calculating the “average subscriber acquisition costs per new Pay-TV subscriber activation,” or Pay-TV SAC, and we believe presentations of Pay-TV SAC may not be calculated consistently by different companies in the same or similar businesses. Our Pay-TV SAC is calculated as “Subscriber acquisition costs,” excluding “Subscriber acquisition costs” associated with our broadband services, plus the value of equipment capitalized under our lease program for new DISH branded pay-TV subscribers, divided by gross new Pay-TV subscriber activations. We include all the costs of acquiring Pay-TV subscribers (e.g., subsidized and capitalized equipment) as we believe it is a more comprehensive measure of how much we are spending to acquire subscribers. We also include all new Pay-TV subscribers in our calculation, including Pay-TV subscribers added with little or no subscriber acquisition costs. Subscriber acquisition costs for Sling branded pay-TV subscribers are significantly lower than those for DISH branded pay-TV subscribers, and therefore, as Sling branded pay-TV subscriber activations increase, it will have a positive impact on Pay-TV SAC.

General and administrative expenses. “General and administrative expenses” consists primarily of employee-related costs associated with administrative services such as legal, information systems, and accounting and finance. It also includes outside professional fees (e.g., legal, information systems and accounting services) and other items associated with facilities and administration.

Interest expense, net of amounts capitalized. “Interest expense, net of amounts capitalized” primarily includes interest expense (net of capitalized interest), prepayment premiums, amortization of debt discounts and debt issuance costs associated with our long-term debt, and interest expense associated with our capital lease obligations. See Note 2 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information regarding our capitalized interest policy.

Other, net. The main components of “Other, net” are gains and losses realized on the sale and/or conversion of marketable and non-marketable investment securities and derivative financial instruments, impairment of marketable and non-marketable investment securities, unrealized gains and losses from changes in fair value of marketable and non-marketable strategic investments accounted for under the Fair Value Option and derivative financial instruments, and equity in earnings and losses of our affiliates.

Earnings before interest, taxes, depreciation and amortization (“EBITDA”). EBITDA is defined as “Net income (loss) attributable to DISH Network” plus “Interest expense, net of amounts capitalized” net of “Interest income,” “Income tax (provision) benefit, net” and “Depreciation and amortization.” This “non-GAAP measure” is reconciled to “Net income (loss) attributable to DISH Network” in our discussion of “Results of Operations” below.

Pay-TV subscribers. We include customers obtained through direct sales, independent third-party retailers and other independent third-party distribution relationships in our Pay-TV subscriber count. We also provide DISH branded pay-TV service to hotels, motels and other commercial accounts. For certain of these commercial accounts, we previously divided our total revenue for these commercial accounts by an amount approximately equal to the retail price of our DISH America programming package, and included the resulting number, which is substantially smaller than the actual number of commercial units served, in our Pay-TV subscriber count. During the third quarter 2016, we launched our Flex Pack programming package that represents our lowest tier programming package under which a new subscriber can activate, and, effective September 30, 2016, we began dividing the total revenue for these certain commercial accounts by an amount approximately equal to the retail price of our Flex Pack programming package. The impact of this change was an increase to our ending subscriber count of approximately 166,000 subscribers during the third quarter 2016. This had no impact on our gross new Pay-TV subscriber activations or net Pay-TV subscriber losses for the year ended December 31, 2016. All Sling branded pay-TV subscribers are included in our Pay-TV subscriber count. Sling branded pay-TV subscribers receiving service for no charge, under certain new subscriber promotions, are excluded from our Pay-TV subscriber count. Sling branded pay-TV subscribers are reported net of disconnects in our gross new Pay-TV subscriber activations. For customers who subscribe to both our DISH branded pay-TV service and our Sling branded pay-TV services, each subscription is counted as a separate Pay-TV subscriber.

Broadband subscribers. We include customers who subscribe to either our satellite broadband service or our wireline broadband service under the dishNET brand as Broadband subscribers. Each broadband customer is counted as one Broadband subscriber, regardless of whether they are also a Pay-TV subscriber. A subscriber of both our Pay-TV and broadband services is counted as one Pay-TV subscriber and one Broadband subscriber.

Pay-TV average monthly revenue per subscriber (“Pay-TV ARPU”). We are not aware of any uniform standards for calculating ARPU and believe presentations of ARPU may not be calculated consistently by other companies in the same or similar businesses. We calculate Pay-TV average monthly revenue per Pay-TV subscriber, or Pay-TV ARPU, by dividing average monthly “Subscriber-related revenue,” excluding revenue from broadband services, for the period by our average number of Pay-TV subscribers for the period. The average number of Pay-TV subscribers is calculated for the period by adding the average number of Pay-TV subscribers for each month and dividing by the number of months in the period. The average number of Pay-TV subscribers for each month is calculated by adding the beginning and ending Pay-TV subscribers for the month and dividing by two. Sling branded pay-TV subscribers on average purchase lower priced programming services than DISH branded pay-TV subscribers, and therefore, as Sling branded pay-TV subscribers increase, it will have a negative impact on Pay-TV ARPU.

Pay-TV average monthly subscriber churn rate (“Pay-TV churn rate”). We are not aware of any uniform standards for calculating subscriber churn rate and believe presentations of subscriber churn rates may not be calculated consistently by different companies in the same or similar businesses. We calculate Pay-TV churn rate for any period by dividing the number of DISH branded pay-TV subscribers who terminated service during the period by the average number of Pay-TV subscribers for the same period, and further dividing by the number of months in the period. When calculating the Pay-TV churn rate, the same methodology for calculating average number of Pay-TV subscribers is used as when calculating Pay-TV ARPU. As described above, Sling branded pay-TV subscribers are reported net of disconnects in our gross new Pay-TV subscriber activations. Therefore, to the extent that our Sling branded pay-TV subscriber base grows, our Pay-TV churn rate will be positively impacted.

Free cash flow. We define free cash flow as “Net cash flows from operating activities” less “Purchases of property and equipment” and “Capitalized interest related to FCC authorizations,” as shown on our Consolidated Statements of Cash Flows.

RESULTS OF OPERATIONS

Year Ended December 31, 2016 Compared to the Year Ended December 31, 2015.

Statements of Operations Data	For the Years Ended December 31,		Variance	
	2016	2015	Amount	%
	(In thousands)			
Revenue:				
Subscriber-related revenue	\$ 15,033,939	\$ 14,953,559	\$ 80,380	0.5
Equipment sales and other revenue	60,623	115,342	(54,719)	(47.4)
Total revenue	15,094,562	15,068,901	25,661	0.2
Costs and Expenses:				
Subscriber-related expenses	8,887,437	8,783,009	104,428	1.2
% of Subscriber-related revenue	59.1 %	58.7 %		
Satellite and transmission expenses	726,791	762,832	(36,041)	(4.7)
% of Subscriber-related revenue	4.8 %	5.1 %		
Cost of sales - equipment and other	61,915	91,654	(29,739)	(32.4)
Subscriber acquisition costs	1,470,940	1,682,548	(211,608)	(12.6)
General and administrative expenses	783,224	777,507	5,717	0.7
% of Total revenue	5.2 %	5.2 %		
FCC auction expense (Note 14)	—	515,555	(515,555)	*
Depreciation and amortization	953,146	1,000,048	(46,902)	(4.7)
Impairment of long-lived assets (Note 8)	—	123,352	(123,352)	*
Total costs and expenses	12,883,453	13,736,505	(853,052)	(6.2)
Operating income (loss)	2,211,109	1,332,396	878,713	65.9
Other Income (Expense):				
Interest income	31,164	19,523	11,641	59.6
Interest expense, net of amounts capitalized	(52,992)	(494,010)	441,018	89.3
Other, net	117,182	278,043	(160,861)	(57.9)
Total other income (expense)	95,354	(196,444)	291,798	*
Income (loss) before income taxes	2,306,463	1,135,952	1,170,511	*
Income tax (provision) benefit, net	(837,009)	(366,676)	(470,333)	*
Effective tax rate	36.3 %	32.3 %		
Net income (loss)	1,469,454	769,276	700,178	91.0
Less: Net income (loss) attributable to noncontrolling interests, net of tax	19,601	22,184	(2,583)	(11.6)
Net income (loss) attributable to DISH Network	\$ 1,449,853	\$ 747,092	\$ 702,761	94.1
Other Data:				
Pay-TV subscribers, as of period end (in millions)	13.671	** 13.897	(0.226)	(1.6)
Pay-TV subscriber additions, gross (in millions)	2.614	2.773	(0.159)	(5.7)
Pay-TV subscriber additions (losses), net (in millions)	(0.392)	(0.081)	(0.311)	*
Pay-TV average monthly subscriber churn rate ("Pay-TV churn rate")	1.83 %	1.71 %	0.12 %	7.0
Pay-TV average subscriber acquisition cost per subscriber ("Pay-TV SAC")	\$ 643	\$ 723	\$ (80)	(11.1)
Pay-TV average monthly revenue per subscriber ("Pay-TV ARPU")	\$ 88.66	\$ 86.79	\$ 1.87	2.2
Broadband subscribers, as of period end (in millions)	0.580	0.623	(0.043)	(6.9)
Broadband subscriber additions, gross (in millions)	0.170	0.237	(0.067)	(28.3)
Broadband subscriber additions (losses), net (in millions)	(0.043)	0.046	(0.089)	*
EBITDA	\$ 3,261,836	\$ 2,588,303	\$ 673,533	26.0

* Percentage is not meaningful.

** Our ending Pay-TV subscriber count increased by approximately 166,000 subscribers during the third quarter 2016 as a result of the change in our calculation for our commercial accounts. See "Explanation of Key Metrics and Other Items – Pay-TV subscribers" for further information.

Pay-TV subscribers. We lost approximately 392,000 net Pay-TV subscribers during the year ended December 31, 2016, compared to the loss of approximately 81,000 net Pay-TV subscribers during the same period in 2015. The increase in net Pay-TV subscriber losses versus the same period in 2015 resulted from a higher Pay-TV churn rate and lower gross new Pay-TV subscriber activations.

Our Pay-TV churn rate for the year ended December 31, 2016 was 1.83% compared to 1.71% for the same period in 2015. Our Pay-TV churn rate continues to be adversely affected by increased competitive pressures, including aggressive marketing, bundled discount offers combining broadband, video and/or wireless services and other discounted promotional offers, as well as cord cutting. Our Pay-TV churn rate is also impacted by, among other things, the credit quality of previously acquired subscribers, our ability to consistently provide outstanding customer service, price increases, programming interruptions in connection with the scheduled expiration of certain programming carriage contracts, our ability to control piracy and other forms of fraud and the level of our retention efforts. As part of our increased emphasis on retaining higher quality subscribers, we have been more selective in issuing retention credits, which has had a negative impact on our Pay-TV churn rate.

During the year ended December 31, 2016, we activated approximately 2.614 million gross new Pay-TV subscribers compared to approximately 2.773 million gross new Pay-TV subscribers during the same period in 2015, a decrease of 5.7%. This decrease in our gross new Pay-TV subscriber activations was primarily impacted by stricter customer acquisition policies for our DISH branded pay-TV subscribers, including an increased emphasis on acquiring higher quality subscribers, as well as increased competitive pressures, including aggressive marketing, more aggressive retention efforts, bundled discount offers combining broadband, video and/or wireless services and other discounted promotional offers. This decrease was partially offset by an increase in Sling branded pay-TV subscriber activations during 2016. In addition, our ending Pay-TV subscriber count increased by approximately 166,000 subscribers during the third quarter 2016 as a result of the change in our calculation for our commercial accounts. This had no impact on our gross new Pay-TV subscriber activations or net Pay-TV subscriber losses for the year ended December 31, 2016. See “*Explanation of Key Metrics and Other Items – Pay-TV subscribers*” for further information.

Our gross new Pay-TV subscriber activations, net Pay-TV subscriber additions and Pay-TV churn rate have been negatively impacted as a result of programming interruptions and threatened programming interruptions in connection with the scheduled expiration of programming carriage contracts with content providers, including, among others, Tribune during the second and third quarters of 2016. We cannot predict with any certainty the impact to our gross new Pay-TV subscriber activations, net Pay-TV subscriber additions and Pay-TV churn rate resulting from similar programming interruptions or threatened programming interruptions that may occur in the future. As a result, we may at times suffer from periods of lower gross new Pay-TV subscriber activations, lower net Pay-TV subscriber additions or higher net Pay-TV subscriber losses, and higher Pay-TV churn rates.

We have not always met our own standards for performing high-quality installations, effectively resolving subscriber issues when they arise, answering subscriber calls in an acceptable timeframe, effectively communicating with our subscriber base, reducing calls driven by the complexity of our business, improving the reliability of certain systems and subscriber equipment, and aligning the interests of certain independent third-party retailers and installers to provide high-quality service. Most of these factors have affected both gross new Pay-TV subscriber activations as well as Pay-TV churn rate. Our future gross new Pay-TV subscriber activations and our Pay-TV churn rate may be negatively impacted by these factors, which could in turn adversely affect our revenue growth.

Broadband subscribers. We lost approximately 43,000 net Broadband subscribers during the year ended December 31, 2016 compared to the addition of approximately 46,000 net Broadband subscribers during the same period in 2015. The net Broadband subscriber losses during the year ended December 31, 2016 primarily resulted from lower gross new Broadband subscriber activations and a higher number of customer disconnects. During the years ended December 31, 2016 and 2015, we activated approximately 170,000 and 237,000 gross new Broadband subscribers, respectively. Gross new Broadband subscriber activations declined primarily due to stricter customer acquisition policies, including an increased emphasis on acquiring higher quality subscribers, lower gross Pay-TV subscriber activations and satellite capacity constraints in certain geographic areas. Customer disconnects have been negatively impacted, in part, by our increased emphasis on retaining higher quality subscribers, which includes, among other things, being more selective in issuing retention credits.

Subscriber-related revenue. “Subscriber-related revenue” totaled \$15.034 billion for the year ended December 31, 2016, an increase of \$80 million or 0.5% compared to the same period in 2015. The change in “Subscriber-related revenue” from the same period in 2015 was primarily related to the increase in Pay-TV ARPU discussed below, partially offset by a lower average Pay-TV subscriber base. Included in “Subscriber-related revenue” was \$457 million and \$439 million of revenue related to our broadband services for the years ended December 31, 2016 and 2015, respectively, representing 3.0% and 2.9% of our total “Subscriber-related revenue,” respectively.

Pay-TV ARPU. Pay-TV ARPU was \$88.66 during the year ended December 31, 2016 versus \$86.79 during the same period in 2015. The \$1.87 or 2.2% increase in Pay-TV ARPU was primarily attributable to the DISH branded pay-TV programming package price increases in February 2016 and 2015. These price increases were partially offset by a shift in DISH branded pay-TV programming package mix and an increase in Sling branded pay-TV subscribers. Sling branded pay-TV subscribers on average purchase lower priced programming services than DISH branded pay-TV subscribers, and therefore, the increase in Sling branded pay-TV subscribers during 2016 had a negative impact on Pay-TV ARPU. We expect this trend to continue.

Subscriber-related expenses. “Subscriber-related expenses” totaled \$8.887 billion during the year ended December 31, 2016, an increase of \$104 million or 1.2% compared to the same period in 2015. The increase in “Subscriber-related expenses” was primarily attributable to higher programming costs per subscriber, partially offset by a lower average Pay-TV subscriber base. The increase in programming costs per subscriber was driven by rate increases in certain of our programming contracts, including the renewal of certain contracts at higher rates, particularly for local broadcast channels. Included in “Subscriber-related expenses” was \$274 million and \$272 million of expense related to our broadband services for the years ended December 31, 2016 and 2015, respectively. “Subscriber-related expenses” represented 59.1% and 58.7% of “Subscriber-related revenue” during the years ended December 31, 2016 and 2015, respectively. The increase in this expense to revenue ratio primarily resulted from higher programming costs, discussed above.

In the normal course of business, we enter into contracts to purchase programming content in which our payment obligations are generally contingent on the number of Pay-TV subscribers to whom we provide the respective content. Our “Subscriber-related expenses” have and may continue to face further upward pressure from price increases and the renewal of long-term programming contracts on less favorable pricing terms. In addition, our programming expenses will continue to increase to the extent we are successful in growing our Pay-TV subscriber base.

Subscriber acquisition costs. “Subscriber acquisition costs” totaled \$1.471 billion for the year ended December 31, 2016, a decrease of \$212 million or 12.6% compared to the same period in 2015. This change was primarily attributable to a decrease in Pay-TV SAC, discussed below, fewer gross new Pay-TV subscriber activations, and a decrease in expense related to our Broadband subscriber activations. Included in “Subscriber acquisition costs” was \$70 million and \$107 million of expenses related to our broadband services for the years ended December 31, 2016 and 2015, respectively.

Pay-TV SAC. Pay-TV SAC was \$643 during the year ended December 31, 2016 compared to \$723 during the same period in 2015, a decrease of \$80 or 11.1%. This change was primarily attributable to an increase in Sling branded pay-TV subscriber activations and a decrease in hardware costs per activation, partially offset by an increase in advertising costs per activation. Subscriber acquisition costs for Sling branded pay-TV subscribers are significantly lower than those for DISH branded pay-TV subscribers, and therefore, the increase in Sling branded pay-TV subscriber activations during 2016 had a positive impact on Pay-TV SAC. We expect this trend to continue. The decrease in hardware costs per activation was primarily due to a higher percentage of remanufactured receivers being activated on new DISH branded pay-TV subscriber accounts and a reduction in manufacturing costs related to certain receiver systems. This decrease in hardware costs was partially offset by an increase in the percentage of new DISH branded pay-TV subscriber activations with Hopper 3 receiver systems, which have a higher cost per unit than the prior generation Hopper receiver systems.

During the years ended December 31, 2016 and 2015, the amount of equipment capitalized under our lease program for new DISH branded pay-TV subscribers totaled \$280 million and \$429 million, respectively. This decrease in capital expenditures under our lease program for new DISH branded pay-TV subscribers resulted primarily from fewer gross new Pay-TV subscriber activations and a decrease in hardware costs per activation, discussed above.

To remain competitive we upgrade or replace subscriber equipment periodically as technology changes, and the costs associated with these upgrades may be substantial. To the extent technological changes render a portion of our existing equipment obsolete, we would be unable to redeploy all returned equipment and consequently would realize less benefit from the Pay-TV SAC reduction associated with redeployment of that returned lease equipment.

Our “Subscriber acquisition costs” and “Pay-TV SAC” may materially increase in the future to the extent that we, among other things, transition to newer technologies, introduce more aggressive promotions, or provide greater equipment subsidies. See further information under “*Liquidity and Capital Resources — Subscriber Acquisition and Retention Costs.*”

FCC auction expense. On October 1, 2015, Northstar Wireless and SNR Wireless notified the FCC that they would not be paying the gross winning bid amounts on certain AWS-3 Licenses. As a result, the FCC retained those AWS-3 Licenses and Northstar Wireless and SNR Wireless owed the FCC an additional interim payment of approximately \$516 million. See Note 14 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Impairment of long-lived assets. “Impairment of long-lived assets” of \$123 million during the year ended December 31, 2015 resulted from an impairment of the D1 satellite and related ground equipment. See Note 8 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Interest expense, net of amounts capitalized. “Interest expense, net of amounts capitalized” totaled \$53 million during the year ended December 31, 2016, a decrease of \$441 million or 89.3% compared to the same period in 2015. This decrease was primarily related to an increase of \$474 million in capitalized interest principally associated with wireless spectrum and a reduction in interest expense as a result of redemptions and repurchases of debt during 2016 and 2015, partially offset by interest expense associated with the issuance of the Convertible Notes due 2026 and our 7 3/4% Senior Notes due 2026. On October 27, 2015, the FCC granted certain AWS-3 Licenses to Northstar Wireless and to SNR Wireless, respectively. We began capitalizing interest expense related to the commercialization of these wireless spectrum licenses in the fourth quarter 2015. See Note 2 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Other, net. “Other, net” income was \$117 million during the year ended December 31, 2016, a decrease of \$161 million or 57.9% compared to the same period in 2015. This change resulted from a decrease in net realized and/or unrealized gains on our derivative financial instruments, partially offset by an increase in net realized gains on our marketable investment securities. See Note 6 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Earnings before interest, taxes, depreciation and amortization. EBITDA was \$3.262 billion during the year ended December 31, 2016, an increase of \$674 million or 26.0% compared to the same period in 2015. EBITDA for the year ended December 31, 2016 was positively impacted by “Other, net” income of \$117 million. EBITDA for the year ended December 31, 2015 was negatively impacted by the “FCC auction expense” of \$516 million and “Impairment of long-lived assets” of \$123 million, partially offset by the positive impact of “Other, net” income of \$278 million. The following table reconciles EBITDA to the accompanying financial statements.

	For the Years Ended December 31,	
	2016	2015
	(In thousands)	
EBITDA	\$ 3,261,836	\$ 2,588,303
Interest, net	(21,828)	(474,487)
Income tax (provision) benefit, net	(837,009)	(366,676)
Depreciation and amortization	(953,146)	(1,000,048)
Net income (loss) attributable to DISH Network	\$ 1,449,853	\$ 747,092

EBITDA is not a measure determined in accordance with accounting principles generally accepted in the United States (“GAAP”) and should not be considered a substitute for operating income, net income or any other measure determined in accordance with GAAP. EBITDA is used as a measurement of operating efficiency and overall financial performance and we believe it to be a helpful measure for those evaluating companies in the pay-TV industry. Conceptually, EBITDA measures the amount of income generated each period that could be used to service debt, pay taxes and fund capital expenditures. EBITDA should not be considered in isolation or as a substitute for measures of performance prepared in accordance with GAAP.

Income tax (provision) benefit, net. Our income tax provision was \$837 million during the year ended December 31, 2016, an increase of \$470 million compared to the same period in 2015. The increase in the provision was primarily related to the increase in “Income (loss) before income taxes” and an increase in our effective tax rate. During the year ended December 31, 2015, our effective tax rate was positively impacted by a \$63 million credit that was previously recorded in “Accumulated other comprehensive income (loss)” and was released to our income tax provision during the year ended December 31, 2015. See Note 5 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Year Ended December 31, 2015 Compared to the Year Ended December 31, 2014.

Statements of Operations Data	For the Years Ended December 31,		Variance	
	2015	2014	Amount	%
	(In thousands)			
Revenue:				
Subscriber-related revenue	\$ 14,953,559	\$ 14,495,091	\$ 458,468	3.2
Equipment sales and other revenue	115,342	148,296	(32,954)	(22.2)
Total revenue	15,068,901	14,643,387	425,514	2.9
Costs and Expenses:				
Subscriber-related expenses	8,783,009	8,313,046	469,963	5.7
% of Subscriber-related revenue	58.7 %	57.4 %		
Satellite and transmission expenses	762,832	693,114	69,718	10.1
% of Subscriber-related revenue	5.1 %	4.8 %		
Cost of sales - equipment and other	91,654	107,777	(16,123)	(15.0)
Subscriber acquisition costs	1,682,548	1,811,318	(128,770)	(7.1)
General and administrative expenses	777,507	815,745	(38,238)	(4.7)
% of Total revenue	5.2 %	5.6 %		
FCC auction expense (Note 14)	515,555	—	515,555	*
Depreciation and amortization	1,000,048	1,077,936	(77,888)	(7.2)
Impairment of long-lived assets (Note 8)	123,352	—	123,352	*
Total costs and expenses	13,736,505	12,818,936	917,569	7.2
Operating income (loss)	1,332,396	1,824,451	(492,055)	(27.0)
Other Income (Expense):				
Interest income	19,523	61,841	(42,318)	(68.4)
Interest expense, net of amounts capitalized	(494,010)	(611,209)	117,199	19.2
Other, net	278,043	(69,341)	347,384	*
Total other income (expense)	(196,444)	(618,709)	422,265	68.2
Income (loss) before income taxes	1,135,952	1,205,742	(69,790)	(5.8)
Income tax (provision) benefit, net	(366,676)	(276,840)	(89,836)	(32.5)
Effective tax rate	32.3 %	23.0 %		
Net income (loss)	769,276	928,902	(159,626)	(17.2)
Less: Net income (loss) attributable to noncontrolling interests, net of tax	22,184	(15,791)	37,975	*
Net income (loss) attributable to DISH Network	\$ 747,092	\$ 944,693	\$ (197,601)	(20.9)
Other Data:				
Pay-TV subscribers, as of period end (in millions)	13.897	13.978	(0.081)	(0.6)
Pay-TV subscriber additions, gross (in millions)	2.773	2.601	0.172	6.6
Pay-TV subscriber additions (losses), net (in millions)	(0.081)	(0.079)	(0.002)	(2.5)
Pay-TV average monthly subscriber churn rate ("Pay-TV churn rate")	1.71 %	1.59 %	0.12 %	7.5
Pay-TV average subscriber acquisition cost per subscriber ("Pay-TV SAC")	\$ 723	\$ 853	\$ (130)	(15.2)
Pay-TV average monthly revenue per subscriber ("Pay-TV ARPU")	\$ 86.79	\$ 83.77	\$ 3.02	3.6
Broadband subscribers, as of period end (in millions)	0.623	0.577	0.046	8.0
Broadband subscriber additions, gross (in millions)	0.237	0.295	(0.058)	(19.7)
Broadband subscriber additions (losses), net (in millions)	0.046	0.141	(0.095)	(67.4)
EBITDA	\$ 2,588,303	\$ 2,848,837	\$ (260,534)	(9.1)

* Percentage is not meaningful.

Pay-TV subscribers. We lost approximately 81,000 net Pay-TV subscribers during the year ended December 31, 2015, compared to the loss of approximately 79,000 net Pay-TV subscribers during the same period in 2014. The increase in net Pay-TV subscriber losses versus the same period in 2014 resulted from a higher Pay-TV churn rate discussed below, partially offset by higher gross new Pay-TV subscriber activations, primarily related to the activation of Sling branded pay-TV subscribers, which are reported net of disconnects. Our Sling domestic service was launched in February 2015.

Our Pay-TV churn rate for the year ended December 31, 2015 was 1.71% compared to 1.59% for the same period in 2014. Our Pay-TV churn rate increased during the year ended December 31, 2015 as a result of increased competitive pressures, including aggressive marketing, bundled discount offers combining broadband, video and/or wireless services and other discounted promotional offers, as well as cord cutting. Our Pay-TV churn rate is also impacted by, among other things, the credit quality of previously acquired subscribers, our ability to consistently provide outstanding customer service, price increases, programming interruptions in connection with the scheduled expiration of certain programming carriage contracts, our ability to control piracy and other forms of fraud and the level of our retention efforts.

During the year ended December 31, 2015, we activated approximately 2.773 million gross new Pay-TV subscribers compared to approximately 2.601 million gross new Pay-TV subscribers during the same period in 2014, an increase of 6.6%. The increase in our gross new Pay-TV subscriber activations primarily related to the activation of Sling branded pay-TV subscribers, which are reported net of disconnects, partially offset by stricter customer acquisition policies for our DISH branded pay-TV subscribers (including a focus on attaining higher quality subscribers) and increased competitive pressures, including aggressive marketing, more aggressive retention efforts, bundled discount offers combining broadband, video and/or wireless services and other discounted promotional offers. Furthermore, our gross new Pay-TV subscriber activations were negatively impacted by programming interruptions in connection with the scheduled expiration of certain programming carriage contracts during the first half of the first quarter 2015.

Broadband subscribers. We added approximately 46,000 net Broadband subscribers during the year ended December 31, 2015 compared to the addition of approximately 141,000 net Broadband subscribers during the same period in 2014. This decrease in net Broadband subscriber additions versus the same period in 2014 resulted from lower gross new Broadband subscriber activations and a higher number of customer disconnects. During the year ended December 31, 2015 and 2014, we activated approximately 237,000 and 295,000 gross new Broadband subscribers, respectively. Gross new Broadband subscriber activations declined primarily due to stricter customer acquisition policies and satellite capacity constraints in certain geographic areas. Customer disconnects were higher primarily due to a larger Broadband subscriber base during the year ended December 31, 2015 compared to the same period in 2014.

Subscriber-related revenue. “Subscriber-related revenue” totaled \$14.954 billion for the year ended December 31, 2015, an increase of \$458 million or 3.2% compared to the same period in 2014. The change in “Subscriber-related revenue” from the same period in 2014 was primarily related to the increase in Pay-TV ARPU discussed below and increased revenue from broadband services, partially offset by a lower average Pay-TV subscriber base. Included in “Subscriber-related revenue” was \$439 million and \$376 million of revenue related to our broadband services for the years ended December 31, 2015 and 2014, respectively, representing 2.9% and 2.6% of our total “Subscriber-related revenue,” respectively.

Pay-TV ARPU. Pay-TV ARPU was \$86.79 during the year ended December 31, 2015 versus \$83.77 during the same period in 2014. The \$3.02 or 3.6% increase in Pay-TV ARPU was primarily attributable to the DISH branded pay-TV programming package price increases in February 2015 and 2014 and higher hardware related revenue. These increases were partially offset by a shift in DISH branded pay-TV programming package mix, an increase in retention credits and an increase in Sling branded pay-TV subscribers. Sling branded pay-TV subscribers on average purchase lower priced programming services than DISH branded pay-TV subscribers. Accordingly, for the year ended December 31, 2015, the increase in Sling branded pay-TV subscribers had a negative impact on Pay-TV ARPU.

Subscriber-related expenses. “Subscriber-related expenses” totaled \$8.783 billion during the year ended December 31, 2015, an increase of \$470 million or 5.7% compared to the same period in 2014. The increase in “Subscriber-related expenses” was primarily attributable to higher programming costs and higher Broadband subscriber-related expenses due to the increase in our Broadband subscriber base, partially offset by a decrease in variable and retention costs per subscriber and a lower average Pay-TV subscriber base. The increase in programming costs was driven by rate increases in certain of our programming contracts, including the renewal of certain contracts at higher rates. Included in “Subscriber-related expenses” was \$272 million and \$242 million of expense related to our broadband services for the years ended December 31, 2015 and 2014, respectively. “Subscriber-related expenses” represented 58.7% and 57.4% of “Subscriber-related revenue” during the years ended December 31, 2015 and 2014, respectively. The change in this expense to revenue ratio primarily resulted from higher programming costs, discussed above.

Satellite and transmission expenses. “Satellite and transmission expenses” totaled \$763 million during the year ended December 31, 2015, an increase of \$70 million or 10.1% compared to the same period in 2014. The increase in “Satellite and transmission expenses” was primarily related to an increase in transmission costs associated with our Sling TV services and an increase in uplink costs and in transponder capacity leased from EchoStar, related to our DISH branded pay-TV service.

Subscriber acquisition costs. “Subscriber acquisition costs” totaled \$1.683 billion for the year ended December 31, 2015, a decrease of \$129 million or 7.1% compared to the same period in 2014. This change was primarily attributable to a decrease in Pay-TV SAC, discussed below, and a decrease in expense related to our Broadband subscriber activations. Included in “Subscriber acquisition costs” was \$107 million and \$136 million of expenses related to our broadband services for the years ended December 31, 2015 and 2014, respectively.

Pay-TV SAC. Pay-TV SAC was \$723 during the year ended December 31, 2015 compared to \$853 during the same period in 2014, a decrease of \$130 or 15.2%. This change was primarily attributable to an increase in Sling branded pay-TV subscriber activations and a decrease in hardware costs per activation. The decrease in hardware costs per activation was driven by a reduction in manufacturing costs for current generation Hopper receiver systems and a higher percentage of remanufactured receivers being activated on new DISH branded pay-TV subscriber accounts.

During the years ended December 31, 2015 and 2014, the amount of equipment capitalized under our lease program for new DISH branded pay-TV subscribers totaled \$429 million and \$543 million, respectively. This decrease in capital expenditures under our lease program for new DISH branded pay-TV subscribers resulted primarily from a decrease in hardware costs per activation, discussed above.

FCC auction expense. On October 1, 2015, Northstar Wireless and SNR Wireless notified the FCC that they would not be paying the gross winning bid amounts on certain AWS-3 Licenses. As a result, the FCC retained those AWS-3 Licenses and Northstar Wireless and SNR Wireless owed the FCC an additional interim payment of approximately \$516 million. See Note 14 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Depreciation and amortization. “Depreciation and amortization” expense totaled \$1.000 billion during the year ended December 31, 2015, a \$78 million or 7.2% decrease compared to the same period in 2014. During the year ended December 31, 2015, we had a decrease in depreciation expense from equipment leased to new and existing DISH branded pay-TV subscribers and from certain assets that support the DISH branded pay-TV service, which became fully depreciated during 2015. In addition, depreciation expense was lower in 2015 as a result of certain satellites transferred to EchoStar as part of the Satellite and Tracking Stock Transaction.

Impairment of long-lived assets. “Impairment of long-lived assets” of \$123 million during the year ended December 31, 2015 resulted from an impairment of the D1 satellite and related ground equipment. See Note 8 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Interest expense, net of amounts capitalized. “Interest expense, net of amounts capitalized” totaled \$494 million during the year ended December 31, 2015, a decrease of \$117 million or 19.2% compared to the same period in 2014. This decrease was primarily related to an increase in capitalized interest principally associated with wireless spectrum and a reduction in interest expense from debt redemptions during 2015 and 2014, partially offset by interest expense associated with the issuance in November 2014 of our 5 7/8% Senior Notes due 2024. On October 27, 2015, the FCC granted the Northstar Licenses to Northstar Wireless and the SNR Licenses to SNR Wireless. We began capitalizing interest expense related to the commercialization of these wireless spectrum licenses in the fourth quarter 2015. See Note 2 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Other, net. “Other, net” income was \$278 million during the year ended December 31, 2015, compared to expense of \$69 million for the same period in 2014. The year ended December 31, 2015 was positively impacted by net realized and/or unrealized gains on our marketable investment securities and derivative financial instruments. The year ended December 31, 2014 was negatively impacted primarily by unrealized losses on our derivative financial instruments. See Note 6 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Earnings before interest, taxes, depreciation and amortization. EBITDA was \$2.588 billion during the year ended December 31, 2015, a decrease of \$261 million or 9.1% compared to the same period in 2014. EBITDA for the year ended December 31, 2015 was negatively impacted by the “FCC auction expense” of \$516 million and “Impairment of long-lived assets” of \$123 million, partially offset by the positive impact of “Other, net” income of \$278 million. EBITDA for the year ended December 31, 2014 was negatively impacted by “Other, net” expense of \$69 million. The following table reconciles EBITDA to the accompanying financial statements.

	For the Years Ended December 31,	
	2015	2014
	(In thousands)	
EBITDA	\$ 2,588,303	\$ 2,848,837
Interest, net	(474,487)	(549,368)
Income tax (provision) benefit, net	(366,676)	(276,840)
Depreciation and amortization	(1,000,048)	(1,077,936)
Net income (loss) attributable to DISH Network	\$ 747,092	\$ 944,693

EBITDA is not a measure determined in accordance with GAAP and should not be considered a substitute for operating income, net income or any other measure determined in accordance with GAAP. EBITDA is used as a measurement of operating efficiency and overall financial performance and we believe it to be a helpful measure for those evaluating companies in the pay-TV industry. Conceptually, EBITDA measures the amount of income generated each period that could be used to service debt, pay taxes and fund capital expenditures. EBITDA should not be considered in isolation or as a substitute for measures of performance prepared in accordance with GAAP.

Income tax (provision) benefit, net. Our income tax provision was \$367 million during the year ended December 31, 2015 compared to \$277 million in 2014. The increase in the provision was related to an increase in our effective tax rate, partially offset by a decrease in “Income (loss) before income taxes.” Our effective tax rate during 2014 was favorably impacted by tax planning strategies related to the tax structure of certain foreign legal entities. During 2015, our effective tax rate was positively impacted by a \$63 million credit that was previously recorded in “Accumulated other comprehensive income (loss)” and was released to our income tax provision during the year ended December 31, 2015. See Note 5 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

LIQUIDITY AND CAPITAL RESOURCES

Cash, Cash Equivalents and Current Marketable Investment Securities

We consider all liquid investments purchased within 90 days of their maturity to be cash equivalents. See Note 6 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information regarding our marketable investment securities. As of December 31, 2016, our cash, cash equivalents and current marketable investment securities totaled \$5.359 billion compared to \$1.611 billion as of December 31, 2015, an increase of \$3.748 billion. This increase in cash, cash equivalents and current marketable investment securities primarily resulted from \$4.973 billion in net proceeds from the issuance of our 7 3/4% Senior Notes due 2026 and the Convertible Notes due 2026, cash generated from operating activities of \$2.802 billion and an \$562 million settlement of our derivative financial instruments. These amounts were partially offset by the redemption of our 7 1/8% Senior Notes with an aggregate principal balance of \$1.5 billion, capital expenditures of \$1.327 billion (including capitalized interest related to FCC authorizations), \$260 million in net cost incurred in connection with the convertible note hedge and warrant transactions and a refundable payment to a third party in connection with a potential asset purchase.

Debt Maturity

Our 7 3/4% Senior Notes with a remaining principal balance of \$650 million were redeemed on June 1, 2015.

Our 7 1/8% Senior Notes with an aggregate principal balance of \$1.5 billion were redeemed on February 1, 2016.

Our 4 5/8% Senior Notes with an aggregate principal balance of \$900 million mature on July 15, 2017. We expect to fund this obligation from cash and marketable investment securities balances at that time. But, depending on market conditions, we may refinance this obligation in whole or in part.

Cash Flow

The following discussion highlights our cash flow activities during the years ended December 31, 2016, 2015 and 2014.

Cash flows from operating activities. We typically reinvest the cash flow from operating activities in our business primarily to grow our subscriber base, expand our infrastructure, make strategic investments and repay debt obligations. For the years ended December 31, 2016, 2015 and 2014, we reported “Net cash flows from operating activities” of \$2.802 billion, \$2.436 billion, and \$2.378 billion, respectively.

Net cash flows from operating activities from 2015 to 2016 increased \$366 million, primarily attributable to a \$999 million increase in income adjusted to exclude non-cash charges for “Realized and unrealized losses (gains) on investments,” “Depreciation and amortization” expense, “Impairment of long-lived assets” and “Deferred tax expense (benefit),” partially offset by an increase in cash outflows resulting from changes in operating assets and liabilities principally attributable to timing differences between book expense and cash payments, including income taxes.

Net cash flows from operating activities from 2014 to 2015 increased \$58 million, primarily attributable to an increase in cash resulting from changes in operating assets and liabilities principally attributable to timing differences between book expense and cash payments, including income taxes. This increase was partially offset by a \$390 million decrease in income adjusted to exclude non-cash charges for “Realized and unrealized losses (gains) on investments,” “Impairment of long-lived assets,” “Depreciation and amortization” expense and “Deferred tax expense (benefit).” Included in this amount is the \$516 million payment related to the “FCC auction expense.”

Cash flows from investing activities. Our investing activities generally include purchases and sales of marketable investment securities, acquisitions, strategic investments, including purchases and settlements of derivative financial instruments and purchases of spectrum licenses, and cash used to grow our subscriber base and expand our infrastructure. For the years ended December 31, 2016, 2015 and 2014, we reported outflows from “Net cash flows from investing activities” of \$1.729 billion, \$8.074 billion and \$963 million, respectively. During the years ended December 31, 2016, 2015 and 2014, capital expenditures for new and existing DISH branded pay-TV customer equipment totaled \$446 million, \$573 million and \$755 million, respectively. During the years ended December 31, 2016, 2015 and 2014, capital expenditures for new and existing broadband customer equipment totaled \$12 million, \$25 million and \$51 million, respectively, of which \$10 million, \$23 million and \$48 million was for new broadband customer equipment.

The year ended December 31, 2016 was negatively impacted by cash outflows primarily related to capital expenditures of \$1.327 billion (including capitalized interest related to FCC authorizations) and a refundable payment to a third party in connection with a potential asset purchase, partially offset by an \$562 million settlement of our derivative financial instruments and \$524 million in net sales of marketable investment securities. The year ended December 31, 2015 was negatively impacted by cash outflows associated with our non-controlling investments in the Northstar Entities and the SNR Entities related to the AWS-3 Licenses of \$8.970 billion and “Purchases of property and equipment (including capitalized interest related to FCC authorizations)” of \$1.114 billion, partially offset by net sales of marketable investment securities of \$1.607 billion and a refund from the FCC of our \$400 million upfront payment related to the AWS-3 Auction in 2015. The year ended December 31, 2014 was negatively impacted by purchases of H Block wireless spectrum licenses of \$1.343 billion, AWS-3 Auction deposits of \$1.320 billion and “Purchases of property and equipment (including capitalized interest related to FCC authorizations)” of \$1.216 billion, partially offset by net sales of marketable investment securities of \$2.935 billion.

Cash flows from financing activities. Our financing activities generally include net proceeds related to the issuance of long-term debt, cash used for the repurchase, redemption or payment of long-term debt and capital lease obligations, dividends paid on our Class A and Class B common stock and repurchases of our Class A common stock. For the year ended December 31, 2016, we reported inflows from “Net cash flows from financing activities” of \$3.197 billion. For the year ended December 31, 2015, we reported outflows from “Net cash flows from financing activities” of \$413 million. For the year ended December 31, 2014, we reported inflows from “Net cash flows from financing activities” of \$980 million.

The net cash inflows in 2016 primarily related to \$4.973 billion in net proceeds from the issuance of our 7 3/4% Senior Notes due 2026 and the Convertible Notes due 2026, partially offset by the redemption of our 7 1/8% Senior Notes with an aggregate principal balance of \$1.5 billion and \$260 million in net cost incurred in connection with the convertible note hedge and warrant transactions.

The net cash outflows in 2015 primarily related to the redemption of our 7 3/4% Senior Notes due 2015 of \$650 million, partially offset by \$204 million in aggregate capital contributions to Northstar Spectrum and SNR HoldCo from Northstar Manager and SNR Management, respectively.

The net cash inflows in 2014 primarily resulted from net proceeds of \$1.992 billion from the issuance in November 2014 of our 5 7/8% Senior Notes due 2024, partially offset by the repurchases and redemption of our 6 5/8% Senior Notes due 2014 of \$1.0 billion and repurchases of our 7 3/4% Senior Notes due 2015 of \$100 million in open market trades.

Free Cash Flow

We define free cash flow as “Net cash flows from operating activities” less “Purchases of property and equipment,” and “Capitalized interest related to FCC authorizations,” as shown on our Consolidated Statements of Cash Flows. We believe free cash flow is an important liquidity metric because it measures, during a given period, the amount of cash generated that is available to repay debt obligations, make investments, fund acquisitions and for certain other activities. Free cash flow is not a measure determined in accordance with GAAP and should not be considered a substitute for “Operating income,” “Net income,” “Net cash flows from operating activities” or any other measure determined in accordance with GAAP. Since free cash flow includes investments in operating assets, we believe this non-GAAP liquidity measure is useful in addition to the most directly comparable GAAP measure “Net cash flows from operating activities.”

Free cash flow can be significantly impacted from period to period by changes in operating assets and liabilities and in “Purchases of property and equipment” as shown in the “Net cash flows from operating activities” and “Net cash flows from investing activities” sections, respectively, of our Consolidated Statements of Cash Flows included herein. Operating asset and liability balances can fluctuate significantly from period to period and there can be no assurance that free cash flow will not be negatively impacted by material changes in operating assets and liabilities in future periods, since these changes depend upon, among other things, management’s timing of payments and control of inventory levels, and cash receipts. In addition to fluctuations resulting from changes in operating assets and liabilities, free cash flow can vary significantly from period to period depending upon, among other things, subscriber growth, subscriber revenue, subscriber churn, subscriber acquisition and retention costs including amounts capitalized under our equipment lease programs, operating efficiencies, increases or decreases in purchases of property and equipment, commercialization of our wireless spectrum and other factors.

The following table reconciles free cash flow to “Net cash flows from operating activities.”

	For the Years Ended December 31,		
	2016	2015	2014
	(In thousands)		
Free cash flow	\$ 1,474,802	\$ 1,321,703	\$ 1,162,263
Add back:			
Purchases of property and equipment (including capitalized interest related to FCC authorizations)	1,327,350	1,114,377	1,215,861
Net cash flows from operating activities	<u>\$ 2,802,152</u>	<u>\$ 2,436,080</u>	<u>\$ 2,378,124</u>

Operational Liquidity

We make general investments in property such as satellites, set-top boxes, information technology and facilities that support our overall business. Moreover, since we are primarily a subscriber-based company, we also make subscriber-specific investments to acquire new subscribers and retain existing subscribers. While the general investments may be deferred without impacting the business in the short-term, the subscriber-specific investments are less discretionary. Our overall objective is to generate sufficient cash flow over the life of each subscriber to provide an adequate return against the upfront investment. Once the upfront investment has been made for each subscriber, the subsequent cash flow is generally positive, but there can be no assurances that over time we will recoup or earn a return on the upfront investment.

There are a number of factors that impact our future cash flow compared to the cash flow we generate at a given point in time. The first factor is our Pay-TV churn rate and how successful we are at retaining our current Pay-TV subscribers. As we lose Pay-TV subscribers from our existing base, the positive cash flow from that base is correspondingly reduced. The second factor is how successful we are at maintaining our subscriber-related margins. To the extent our “Subscriber-related expenses” grow faster than our “Subscriber-related revenue,” the amount of cash flow that is generated per existing subscriber is reduced. The third factor is the rate at which we acquire new subscribers. The faster we acquire new subscribers, the more our positive ongoing cash flow from existing subscribers is offset by the negative upfront cash flow associated with acquiring new subscribers. Finally, our future cash flow is impacted by the rate at which we make general investments and any cash flow from financing activities.

Our subscriber-specific investments to acquire new subscribers have a significant impact on our cash flow. While fewer subscribers will likely translate into lower ongoing cash flow in the long-term, cash flow is actually aided, in the short-term, by the reduction in subscriber-specific investment spending. As a result, a slow-down in our business due to external or internal factors does not introduce the same level of short-term liquidity risk as it might in other industries.

Subscriber Base

We lost approximately 392,000 net Pay-TV subscribers during the year ended December 31, 2016, compared to the loss of approximately 81,000 net Pay-TV subscribers during the same period in 2015. The increase in net Pay-TV subscriber losses versus the same period in 2015 resulted from a higher Pay-TV churn rate and lower gross new Pay-TV subscriber activations. See “Results of Operations” above for further information.

Subscriber Acquisition and Retention Costs

We incur significant upfront costs to acquire subscribers, including advertising, independent third-party retailer incentives, equipment subsidies, installation services, and/or new customer promotions. While we attempt to recoup these upfront costs over the lives of their subscription, there can be no assurance that we will be successful in achieving that objective. With respect to our DISH branded pay-TV service, we employ business rules such as minimum credit requirements for prospective customers and contractual commitments to receive service for a minimum term. We strive to provide outstanding customer service, to increase the likelihood of customers keeping their Pay-TV services over longer periods of time. Subscriber acquisition costs for Sling branded pay-TV subscribers are significantly lower than those for DISH branded pay-TV subscribers, and therefore, as Sling branded pay-TV subscriber activations increase, it will have a positive impact on subscriber acquisition costs. Our subscriber acquisition costs may vary significantly from period to period.

We incur significant costs to retain our existing DISH branded pay-TV customers, mostly by upgrading their equipment to HD and DVR receivers and by providing retention credits. As with our subscriber acquisition costs, our retention upgrade spending includes the cost of equipment and installation services. In certain circumstances, we also offer programming at no additional charge and/or promotional pricing for limited periods to existing customers in exchange for a contractual commitment to receive service for a minimum term. A component of our retention efforts includes the installation of equipment for customers who move. Our subscriber retention costs may vary significantly from period to period.

Seasonality

Historically, the first half of the year generally produces fewer gross new Pay-TV subscriber activations than the second half of the year, as is typical in the pay-TV industry. In addition, the first and fourth quarters generally produce a lower churn rate than the second and third quarters. However, we cannot provide assurance that this will continue in the future.

Satellites

Operation of our DISH branded pay-TV service requires that we have adequate satellite transmission capacity for the programming that we offer. Moreover, current competitive conditions require that we continue to expand our offering of new programming. While we generally have had in-orbit satellite capacity sufficient to transmit our existing channels and some backup capacity to recover the transmission of certain critical programming, our backup capacity is limited. In the event of a failure or loss of any of our owned or leased satellites, we may need to acquire or lease additional satellite capacity or relocate one of our other satellites and use it as a replacement for the failed or lost satellite. Such a failure could result in a prolonged loss of critical programming or a significant delay in our plans to expand programming as necessary to remain competitive and cause us to expend a significant portion of our cash to acquire or lease additional satellite capacity.

Security Systems

Increases in theft of our signal or our competitors' signals could, in addition to reducing gross new subscriber activations, also cause subscriber churn to increase. We use Security Access Devices in our DBS receiver systems to control access to authorized programming content. Our signal encryption has been compromised in the past and may be compromised in the future even though we continue to respond with significant investment in security measures, such as Security Access Device replacement programs and updates in security software, that are intended to make signal theft more difficult. It has been our prior experience that security measures may only be effective for short periods of time or not at all and that we remain susceptible to additional signal theft. We expect that future replacements of Security Access Devices may be necessary to keep our system secure. We cannot ensure that we will be successful in reducing or controlling theft of our programming content and we may incur additional costs in the future if our system's security is compromised.

Stock Repurchases

Our Board of Directors previously authorized stock repurchases of up to \$1.0 billion of our outstanding Class A common stock through and including December 31, 2016. On November 2, 2016, our Board of Directors extended this authorization such that we are currently authorized to repurchase up to \$1.0 billion of our outstanding Class A common stock through and including December 31, 2017. As of December 31, 2016, we may repurchase up to \$1.0 billion of our Class A common stock under this program. During the years ended December 31, 2016, 2015 and 2014, there were no repurchases of our Class A common stock.

Covenants and Restrictions Related to our Long-Term Debt

We are subject to the covenants and restrictions set forth in the indentures related to our long-term debt. In particular, the indentures related to our outstanding senior notes issued by DISH DBS Corporation (“DISH DBS”) contain restrictive covenants that, among other things, impose limitations on the ability of DISH DBS and its restricted subsidiaries to: (i) incur additional indebtedness; (ii) enter into sale and leaseback transactions; (iii) pay dividends or make distributions on DISH DBS’ capital stock or repurchase DISH DBS’ capital stock; (iv) make certain investments; (v) create liens; (vi) enter into certain transactions with affiliates; (vii) merge or consolidate with another company; and (viii) transfer or sell assets. Should we fail to comply with these covenants, all or a portion of the debt under the senior notes and our other long-term debt could become immediately payable. The senior notes also provide that the debt may be required to be prepaid if certain change-in-control events occur. In addition, the Convertible Notes due 2026 provide that, if a “fundamental change” (as defined in the related indenture) occurs, holders may require us to repurchase for cash all or part of their Convertible Notes due 2026. As of the date of filing of this Annual Report on Form 10-K, we and DISH DBS were in compliance with the covenants and restrictions related to our respective long-term debt.

Other

We are also vulnerable to fraud, particularly in the acquisition of new subscribers. While we are addressing the impact of subscriber fraud through a number of actions, there can be no assurance that we will not continue to experience fraud, which could impact our subscriber growth and churn. Economic weakness may create greater incentive for signal theft, piracy and subscriber fraud, which could lead to higher subscriber churn and reduced revenue.

Obligations and Future Capital Requirements

Contractual Obligations and Off-Balance Sheet Arrangements

As of December 31, 2016, future maturities of our long-term debt, capital lease and contractual obligations are summarized as follows:

	Payments due by period						
	Total	2017	2018	2019	2020	2021	Thereafter
				(In thousands)			
Long-term debt obligations	\$ 17,147,844	\$ 904,168	\$ 1,204,274	\$ 1,404,385	\$ 1,104,503	\$ 2,004,626	\$ 10,525,888
Capital lease obligations	136,146	33,412	36,260	19,503	19,137	20,615	7,219
Interest expense on long-term debt and capital lease obligations	6,013,072	983,130	903,456	875,684	736,096	639,190	1,875,516
Satellite-related obligations	1,615,590	382,348	348,617	301,102	241,371	208,196	133,956
Operating lease obligations	139,673	41,334	25,266	18,954	13,728	9,332	31,059
Purchase obligations	2,202,987	1,765,669	275,669	130,230	16,386	8,833	6,200
Total	\$ 27,255,312	\$ 4,110,061	\$ 2,793,542	\$ 2,749,858	\$ 2,131,221	\$ 2,890,792	\$ 12,579,838

In certain circumstances the dates on which we are obligated to make these payments could be delayed. These amounts will increase to the extent that we procure launch and/or in-orbit insurance on our satellites or contract for the construction, launch or lease of additional satellites.

The table above does not include \$357 million of liabilities associated with unrecognized tax benefits that were accrued, as discussed in Note 10 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K, and are included on our Consolidated Balance Sheets as of December 31, 2016. We do not expect any portion of this amount to be paid or settled within the next twelve months.

Other than the “Guarantees” disclosed in Note 14 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K, we generally do not engage in off-balance sheet financing activities.

Satellite Insurance

We generally do not carry commercial launch or in-orbit insurance on any of the satellites we use, other than certain satellites leased from third parties. We generally do not use commercial insurance to mitigate the potential financial impact of launch or in-orbit failures because we believe that the cost of insurance premiums is uneconomical relative to the risk of such failures. In light of current favorable market conditions, in January 2016, we procured commercial launch and in-orbit insurance (for a period of one year following launch) for the EchoStar XVIII satellite, which was launched on June 18, 2016. We lease substantially all of our satellite capacity from third parties, including the vast majority of our transponder capacity from EchoStar, and we do not carry commercial insurance on any of the satellites we lease from them. While we generally have had in-orbit satellite capacity sufficient to transmit our existing channels and some backup capacity to recover the transmission of certain critical programming, our backup capacity is limited. In the event of a failure or loss of any of our owned or leased satellites, we may need to acquire or lease additional satellite capacity or relocate one of our other owned or leased satellites and use it as a replacement for the failed or lost satellite.

Purchase Obligations

Our 2017 purchase obligations primarily consist of binding purchase orders for receiver systems and related equipment, broadband equipment, digital broadcast operations, transmission costs, engineering services, and other products and services related to the operation of our Pay-TV services and broadband service. Our purchase obligations also include certain fixed contractual commitments to purchase programming content. Our purchase obligations can fluctuate significantly from period to period due to, among other things, management’s timing of payments and inventory purchases, and can materially impact our future operating asset and liability balances, and our future working capital requirements.

Programming Contracts

In the normal course of business, we enter into contracts to purchase programming content in which our payment obligations are generally contingent on the number of Pay-TV subscribers to whom we provide the respective content. These programming commitments are not included in the “Commitments” table above. The terms of our contracts typically range from one to ten years with annual rate increases. Our programming expenses will continue to increase to the extent we are successful in growing our Pay-TV subscriber base. In addition, programming costs continue to increase due to contractual price increases and the renewal of long-term programming contracts on less favorable pricing terms.

Future Capital Requirements

We expect to fund our future working capital, capital expenditures and debt service requirements from cash generated from operations, existing cash, cash equivalents and marketable investment securities balances, and cash generated through raising additional capital. The amount of capital required to fund our future working capital and capital expenditure needs varies, depending on, among other things, the rate at which we acquire new subscribers and the cost of subscriber acquisition and retention, including capitalized costs associated with our new and existing subscriber equipment lease programs. The majority of our capital expenditures for 2017, with the exception of the commercialization of our existing wireless spectrum licenses and potential purchase of additional wireless spectrum licenses discussed below, are expected to be driven by the costs associated with subscriber premises equipment and capital expenditures for our satellite-related obligations. These expenditures are necessary to operate and maintain our Pay-TV services. Consequently, we consider them to be non-discretionary. The amount of capital required will also depend on the levels of investment necessary to support potential strategic initiatives that may arise from time to time. Our capital expenditures vary depending on the number of satellites leased or under construction at any point in time, and could increase materially as a result of increased competition, significant satellite failures, or economic weakness

and uncertainty. Our Pay-TV subscriber base has been declining and there can be no assurance that our Pay-TV subscriber base will not continue to decline. In the event that our Pay-TV subscriber base continues to decline, it could have a material adverse long-term effect on our cash flow. These factors, including a reduction in our available future cash flows, could require that we raise additional capital in the future.

Volatility in the financial markets has made it more difficult at times for issuers of high-yield indebtedness, such as us, to access capital markets at acceptable terms. These developments may have a significant effect on our cost of financing and our liquidity position.

Wireless

DISH Network Spectrum. We have invested over \$5.0 billion since 2008 to acquire certain wireless spectrum licenses and related assets. We will need to make significant additional investments or partner with others to, among other things, commercialize, build-out, and integrate these licenses and related assets, and any additional acquired licenses and related assets; and comply with regulations applicable to such licenses. Depending on the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such investments or partnerships could vary significantly. In addition, as we consider our options for the commercialization of our wireless spectrum, we may incur significant additional expenses and may have to make significant investments related to, among other things, research and development, wireless testing and wireless network infrastructure. We may also determine that additional wireless spectrum licenses may be required to commercialize our wireless business and to compete with other wireless service providers.

Auction 1000. On February 10, 2016, we filed an application with the FCC to potentially participate as a bidder in the forward auction phase of Auction 1000. The available spectrum in each licensed geographic area in Auction 1000 is generally comprised of certain paired 5x5 spectrum blocks (5 MHz uplink spectrum and 5 MHz downlink spectrum). As a result, a nationwide footprint may be obtained by aggregating a single 5x5 spectrum block in each available licensed geographic area.

Auction 1000 has had multiple stages, with each stage having two phases. With respect to each stage, in the first phase, or reverse auction phase, participating television broadcasters “sell” their rights to use certain broadcast television spectrum in the 600 MHz frequency range to the FCC. Then following the first phase of a stage, in the second phase, or forward auction phase, the FCC will “resell” that spectrum to auction participants. In the event that certain criteria are not met within a particular stage for Auction 1000 to conclude, Auction 1000 then proceeds to a subsequent stage with less available spectrum than the immediately preceding stage and lower spectrum clearing targets.

Before the forward auction phase of Stage 1 of Auction 1000 began, a qualified bidder in the forward auction could make an upfront deposit of up to approximately \$5.4 billion. On July 15, 2016, the FCC announced that a subsidiary of DISH Network and 61 other applicants were qualified to participate in the forward auction. The FCC determined that bidding in Auction 1000 will be “anonymous,” which means that prior to and during the course of the auction, the FCC will not make public any information about a specific applicant’s upfront deposits or its bids. In addition, FCC rules restrict information that applicants may disclose about their participation in Auction 1000.

- ***Stage 1:*** The reverse auction phase of Stage 1 began on March 29, 2016 and ended on June 29, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 1, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 1 would have had to have exceeded approximately \$88.4 billion. The forward auction phase of Stage 1 included 100 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 1 began on August 16, 2016 and ended on August 30, 2016, but the aggregate bids of approximately \$23.1 billion did not exceed the approximately \$88.4 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 2.
- ***Stage 2:*** The reverse auction phase of Stage 2 began on September 13, 2016 and ended on October 13, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 2, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 2 would have had to have exceeded approximately \$56.5 billion. The forward auction phase of Stage 2 included

90 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters' indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 2 began and ended on October 19, 2016, but the aggregate bids of approximately \$21.5 billion did not exceed the approximately \$56.5 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 3.

- **Stage 3:** The reverse auction phase of Stage 3 began on November 1, 2016 and ended on December 1, 2016. Pursuant to the FCC's procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 3, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 3 would have had to have exceeded approximately \$42.3 billion. The forward auction phase of Stage 3 included 80 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters' indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 3 began and ended on December 5, 2016, but the aggregate bids of approximately \$19.7 billion did not exceed the approximately \$42.3 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 4.
- **Stage 4:** The reverse auction phase of Stage 4 began on December 13, 2016 and ended on January 13, 2017. Pursuant to the FCC's procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 4, in order for Auction 1000 to ultimately conclude, the aggregate bids in the forward auction phase of Stage 4 would have to exceed approximately \$12.0 billion. The forward auction phase of Stage 4 includes 70 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters' indicated availability of spectrum in the reverse auction phase. The clock bidding portion of the forward auction phase of Stage 4 began on January 18, 2017 and ended on February 10, 2017. The aggregate bids of approximately \$19.6 billion exceeded the approximately \$12.0 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to the assignment portion of the forward auction phase in which winning bidders in the clock bidding portion have the opportunity to bid for frequency-specific licenses. The assignment portion is scheduled to begin on March 6, 2017, and all assignment rounds are expected to end no later than March 30, 2017. During the assignment portion, the FCC rules restricting information that forward auction applicants may disclose about their participation in Auction 1000 remain in place. As mentioned above, a subsidiary of DISH Network qualified to participate in the forward auction. To the extent that it is the winning bidder for any 600 MHz licenses, we would expect to pay for such licenses from any upfront deposit made with the FCC and/or existing cash and marketable investment securities balances.

See Note 14 "*Commitments and Contingencies — Wireless — DISH Network Spectrum*" in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses. Through our wholly-owned subsidiaries American II and American III, we have made over \$10.0 billion in certain non-controlling investments in Northstar Spectrum, the parent company of Northstar Wireless, and in SNR HoldCo, the parent company of SNR Wireless, respectively. On October 27, 2015, the FCC granted the Northstar Licenses to Northstar Wireless and the SNR Licenses to SNR Wireless, respectively, which are recorded in "FCC authorizations" on our Consolidated Balance Sheets. Under the applicable accounting guidance in ASC 810, Northstar Spectrum and SNR HoldCo are considered variable interest entities and, based on the characteristics of the structure of these entities and in accordance with the applicable accounting guidance, we have consolidated these entities into our financial statements beginning in the fourth quarter 2014. See Note 2 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information. The AWS-3 Licenses are subject to certain interim and final build-out requirements. We may need to make significant additional loans to the Northstar Entities and to the SNR Entities, or they may need to partner with others, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate the Northstar Licenses and the SNR Licenses, and comply with regulations applicable to the Northstar Licenses and the SNR Licenses. Depending upon the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such loans or partnerships could vary significantly. See Note 14 "*Commitments and Contingencies — Wireless — DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses*" in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

We may need to raise significant additional capital in the future to fund the efforts described above, which may not be available on acceptable terms or at all. There can be no assurance that we, the Northstar Entities and/or the SNR Entities will be able to develop and implement business models that will realize a return on these wireless spectrum licenses or that we, the Northstar Entities and/or the SNR Entities will be able to profitably deploy the assets represented by these wireless spectrum licenses, which may affect the carrying amount of these assets and our future financial condition or results of operations. See Note 14 “*Commitments and Contingencies — Wireless*” in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Availability of Credit and Effect on Liquidity

The ability to raise capital has generally existed for us despite economic weakness and uncertainty. While modest fluctuations in the cost of capital will not likely impact our current operational plans, significant fluctuations could have a material adverse effect on our business, results of operations and financial condition.

Critical Accounting Estimates

The preparation of the consolidated financial statements in conformity with GAAP requires management to make estimates, judgments and assumptions that affect amounts reported therein. Management bases its estimates, judgments and assumptions on historical experience and on various other factors that are believed to be reasonable under the circumstances. Actual results may differ from previously estimated amounts, and such differences may be material to our consolidated financial statements. Estimates and assumptions are reviewed periodically, and the effects of revisions are reflected prospectively in the period they occur. The following represent what we believe are the critical accounting policies that may involve a high degree of estimation, judgment and complexity. For a summary of our significant accounting policies, including those discussed below, see Note 2 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K.

- ***Capitalized premise equipment.*** Since we retain ownership of certain equipment provided pursuant to our subscriber equipment lease programs for Pay-TV and Broadband subscribers, we capitalize and depreciate equipment costs that would otherwise be expensed at the time of sale. Such capitalized costs are depreciated over the estimated useful life of the equipment, which is based on, among other things, management’s judgment of the risk of technological obsolescence. Because of the inherent difficulty of making this estimate, the estimated useful life of capitalized equipment may change based on, among other things, historical experience and changes in technology as well as our response to competitive conditions. Changes in estimated useful life may impact “Depreciation and amortization” on our Consolidated Statements of Operations and Comprehensive Income (Loss). For example, if we had decreased the estimated useful life of our capitalized subscriber equipment by one year, annual 2016 depreciation expense would have increased by approximately \$165 million.
- ***Accounting for investments in private and publicly-traded securities.*** We hold debt and equity interests in companies, some of which are publicly traded and have highly volatile prices. We record an investment impairment charge in “Other, net” within “Other Income (Expense)” on our Consolidated Statements of Operations and Comprehensive Income (Loss) when we believe an investment has experienced a decline in value that is judged to be other-than-temporary. We monitor our investments for impairment by considering current factors including economic environment, market conditions and the operational performance and other specific factors relating to the business underlying the investment. Future adverse changes in these factors could result in losses or an inability to recover the carrying amount of the investments that may not be reflected in an investment’s current carrying amount, thereby possibly requiring an impairment charge in the future.

- Valuation of long-lived assets.** We review our long-lived assets and identifiable finite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. For assets which are held and used in operations, the asset would be impaired if the carrying amount of the asset (or asset group) exceeded its undiscounted future net cash flows. Once an impairment is determined, the actual impairment recognized is the difference between the carrying amount and the fair value as estimated using one of the following approaches: income, cost and/or market. The carrying amount of a long-lived asset or asset group is considered impaired when the anticipated undiscounted cash flows from such asset or asset group is less than its carrying amount. In that event, a loss is recorded in “Impairment of long-lived assets” on our Consolidated Statements of Operations and Comprehensive Income (Loss) based on the amount by which the carrying amount exceeds the fair value of the long-lived asset or asset group. Fair value, using the income approach, is determined primarily using a discounted cash flow model that uses the estimated cash flows associated with the asset or asset group under review, discounted at a rate commensurate with the risk involved. Fair value, utilizing the cost approach, is determined based on the replacement cost of the asset reduced for, among other things, depreciation and obsolescence. Fair value, utilizing the market approach, benchmarks the fair value against the carrying amount. See Note 8 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K. Assets which are to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell. We currently evaluate our DBS satellite fleet for impairment as one asset group whenever events or changes in circumstances indicate that its carrying amount may not be recoverable.
- Valuation of intangible assets with indefinite lives.** We evaluate the carrying amount of intangible assets with indefinite lives annually, and also when events and circumstances warrant. During 2016 and 2015, we performed a qualitative assessment to determine whether it is more likely than not that the indefinite-lived asset’s fair value exceeds its carrying amount. In our assessment, we assess relevant qualitative factors, including macroeconomic conditions, overall financial performance, industry and market conditions, relevant company specific events, and perception of the market. When our qualitative assessment is inconclusive, further analysis is required. During 2014, we assessed these assets quantitatively by using one of the income, cost, and/or market approaches. While our qualitative assessment for 2016 and 2015 indicated the fair value of our intangible assets exceeded their carrying amounts, significant changes in our quantitative estimates of future cash flows or market data could result in a write-down of intangible assets with indefinite lives in a future period, which will be recorded in a line item entitled “Impairment of long-lived assets,” on our Consolidated Statements of Operations and Comprehensive Income (Loss) and could be material to our consolidated results of operations and financial condition. Based on the quantitative methodology utilized in 2014 to test for impairment, a 10% decrease in the estimated future cash flows or market value of comparable assets and/or, a 10% increase in the discount rate used in estimating the fair value of these assets (while all other assumptions remain unchanged) did not result in these assets being impaired.
- Income taxes.** Our income tax policy is to record the estimated future tax effects of temporary differences between the tax bases of assets and liabilities and amounts reported in the accompanying consolidated balance sheets, as well as operating loss and tax credit carryforwards. Determining necessary valuation allowances requires us to make assessments about the timing of future events, including the probability of expected future taxable income and available tax planning opportunities. We periodically evaluate our need for a valuation allowance based on both historical evidence, including trends, and future expectations in each reporting period. Any such valuation allowance is recorded in either “Income tax (provision) benefit, net” on our Consolidated Statements of Operations and Comprehensive Income (Loss) or “Accumulated other comprehensive income (loss)” within “Stockholders’ equity (deficit)” on our Consolidated Balance Sheets. Future performance could have a significant effect on the realization of tax benefits, or reversals of valuation allowances, as reported in our consolidated results of operations.
- Uncertainty in tax positions.** Management evaluates the recognition and measurement of uncertain tax positions based on applicable tax law, regulations, case law, administrative rulings and pronouncements and the facts and circumstances surrounding the tax position. Changes in our estimates related to the recognition and measurement of the amount recorded for uncertain tax positions could result in significant changes in our “Income tax provision (benefit), net,” which could be material to our consolidated results of operations.

- **Contingent liabilities.** A significant amount of management judgment is required in determining when, or if, an accrual should be recorded for a contingency and the amount of such accrual. Estimates generally are developed in consultation with counsel and are based on an analysis of potential outcomes. Due to the uncertainty of determining the likelihood of a future event occurring and the potential financial statement impact of such an event, it is possible that upon further development or resolution of a contingent matter, a charge could be recorded in a future period to “General and administrative expenses” or “Litigation expense” on our Consolidated Statements of Operations and Comprehensive Income (Loss) that would be material to our consolidated results of operations and financial condition.
- **Business combinations.** When we acquire a business, we allocate the purchase price to the various components of the acquisition based upon the fair value of each component using various valuation techniques, including the market approach, income approach and/or cost approach. The accounting standard for business combinations requires most identifiable assets, liabilities, noncontrolling interests and goodwill acquired to be recorded at estimated fair value. Determining the fair value of assets acquired and liabilities assumed requires management’s judgment and often involves the use of significant estimates and assumptions, including assumptions with respect to the estimated future cash flows, discounted at a rate commensurate with the risk involved or the market approach.

Inflation

Inflation has not materially affected our operations during the past three years. We believe that our ability to increase the prices charged for our products and services in future periods will depend primarily on competitive pressures.

Backlog

We do not have any material backlog of our products.

New Accounting Pronouncements

Revenue from Contracts with Customers. On May 28, 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update 2014-09 *Revenue from Contracts with Customers* (“ASU 2014-09”), and has modified the standard thereafter. On July 9, 2015, the FASB approved a one year deferral on the effective date for implementation of this standard, which changed the effective date for us to January 1, 2018. This converged standard on revenue recognition was issued jointly with the International Accounting Standards Board to create common revenue recognition guidance for GAAP and International Financial Reporting Standards. ASU 2014-09 provides a framework for revenue recognition that replaces most existing GAAP revenue recognition guidance when it becomes effective. ASU 2014-09 allows for either a full retrospective or modified retrospective adoption. We are evaluating the effect that ASU 2014-09 will have on our consolidated financial statements and related disclosures. We have not yet selected an adoption method. While we have not determined the effect of the standard on our ongoing financial reporting, we believe that the standard will, among other things, change the allocation and timing of when revenue is recognized for those customers who have a contractual commitment to receive service for a minimum term, including time-limited discounts or free service periods. Under current accounting rules, we recognize revenue net of discounts during the promotional periods and do not recognize any revenue during free service periods. Under ASU 2014-09, revenue recognition will be accelerated for these contracts as the impact of discounts or free service periods that are considered performance obligations will be recognized uniformly over the total contractual period. In addition, the standard will require that incremental costs to obtain a customer, which represent a significant portion of our non-advertising subscriber acquisition costs, be deferred and recognized over the expected customer life, whereas our current policy is to expense these costs as incurred. As the new standard will impact revenue and cost recognition for a significant number of our contracts, as well as our business processes and information technology systems, our evaluation of the effect of the new standard is ongoing. We are currently in the process of identifying and implementing changes to our systems, processes, and internal controls to meet the requirements of the standard. The ultimate impact of adopting ASU 2014-09 for both revenue recognition and costs to obtain and fulfill contracts will depend on the promotions and offers in place during the period leading up to and after the adoption of ASU 2014-09.

Recognition and Measurement of Financial Assets and Financial Liabilities. On January 5, 2016, the FASB issued ASU 2016-01 *Recognition and Measurement of Financial Assets and Financial Liabilities* (“ASU 2016-01”), which amends certain aspects of recognition, measurement, presentation and disclosure of financial instruments. This amendment requires all equity investments to be measured at fair value with changes in the fair value recognized through net income (other than those accounted for under equity method of accounting or those that result in consolidation of the investee). This standard will be effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. We are evaluating the impact the adoption of ASU 2016-01 will have on our consolidated financial statements.

Leases. On February 25, 2016, the FASB issued ASU 2016-02 *Leases* (“ASU 2016-02”), which relates to the accounting of leasing transactions. This standard requires a lessee to record on the balance sheet the assets and liabilities for the rights and obligations created by leases with lease terms of more than 12 months. In addition, this standard requires both lessees and lessors to disclose certain key information about lease transactions. This standard will be effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We are evaluating the impact the adoption of ASU 2016-02 will have on our consolidated financial statements.

Financial Instruments – Credit Losses. On June 16, 2016, the FASB issued ASU 2016-13 *Financial Instruments – Credit Losses, Measurement of Credit Losses on Financial Instruments* (“ASU 2016-13”), which changes the way entities measure credit losses for most financial assets and certain other instruments that are not measured at fair value through net earnings. This standard will be effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted. We are evaluating the impact the adoption of ASU 2016-13 will have on our consolidated financial statements and related disclosures.

Statement of Cash Flows - Update. On August 26, 2016, the FASB issued 2016-15 *Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments* (“ASU 2016-15”). This update consists of eight provisions that provide guidance on the classification of certain cash receipts and cash payments. If practicable, this update should be applied using a retrospective transition method to each period presented. For the provisions that are impracticable to apply retrospectively, those provisions may be applied prospectively as of the earliest date practicable. This update will become effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted. We are evaluating the impact the adoption of ASU 2016-15 will have on our consolidated financial statements.

Statement of Cash Flows: Restricted Cash. On November 17, 2016, the FASB issued ASU 2016-18 *Restricted Cash* (“ASU 2016-18”), which addresses the diversity where changes in restricted cash are classified on the cash flow statement. ASU 2016-18 requires that changes in restricted cash and cash equivalents be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts on the statement of cash flows. This standard will be effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted. We expect that the adoption of ASU 2016-18 will have an immaterial impact on our consolidated financial statements and related disclosures.

Compensation – Stock Compensation. On March 30, 2016, the FASB issued ASU 2016-09 *Compensation – Stock Compensation: Improvements to Employee Share-Based Payment Accounting* (“ASU 2016-09”), which relates to the accounting for employee share-based payments. This standard addresses several aspects of the accounting for share-based payment award transactions, including: (a) income tax consequences; (b) classification of awards as either equity or liabilities; and (c) classification on the statement of cash flows. This standard will be effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. During the third quarter 2016, we adopted ASU 2016-09, which had an immaterial impact on our consolidated financial statements.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risks Associated with Financial Instruments

Our investments and debt are exposed to market risks, discussed below.

Cash, Cash Equivalents and Current Marketable Investment Securities

As of December 31, 2016, our cash, cash equivalents and current marketable investment securities had a fair value of \$5.359 billion. Of that amount, a total of \$5.352 billion was invested in: (a) cash; (b) money market funds; (c) debt instruments of the United States Government and its agencies; (d) commercial paper and corporate notes with an overall average maturity of less than one year and rated in one of the four highest rating categories by at least two nationally recognized statistical rating organizations; and/or (e) instruments with similar risk, duration and credit quality characteristics to the commercial paper and corporate obligations described above. The primary purpose of these investing activities has been to preserve principal until the cash is required to, among other things, continue investing in our business, pursue acquisitions and other strategic transactions, fund ongoing operations, repay debt obligations and expand our business. Consequently, the size of this portfolio can fluctuate significantly as cash is received and used in our business for these or other purposes. The value of this portfolio is negatively impacted by credit losses; however, this risk is mitigated through diversification that limits our exposure to any one issuer.

Interest Rate Risk

A change in interest rates would affect the fair value of our cash, cash equivalents and current marketable investment securities portfolio; however, we normally hold these investments to maturity. Based on our December 31, 2016 current non-strategic investment portfolio of \$5.352 billion, a hypothetical 10% change in average interest rates would not have a material impact on the fair value due to the limited duration of our investments.

Our cash, cash equivalents and current marketable investment securities had an average annual rate of return for the year ended December 31, 2016 of 0.8%. A change in interest rates would affect our future annual interest income from this portfolio, since funds would be re-invested at different rates as the instruments mature. A hypothetical 10% decrease in average interest rates during 2016 would result in a decrease of approximately \$2 million in annual interest income.

Strategic Marketable Investment Securities

As of December 31, 2016, we held debt and equity investments in private and public companies with a fair value of \$7 million for strategic and financial purposes, which are highly speculative and have experienced and continue to experience volatility. As of December 31, 2016, our strategic investment portfolio consisted of securities of a small number of issuers, and as a result the value of that portfolio depends, among other things, on the performance of those issuers. The fair value of certain of the debt and equity securities in our investment portfolio can be adversely impacted by, among other things, the issuers' respective performance and ability to obtain any necessary additional financing on acceptable terms, or at all.

The fair value of our strategic and financial debt and equity investments can be significantly impacted by the risk of adverse changes in securities markets generally, as well as risks related to the performance of the companies whose securities we have invested in, risks associated with specific industries, and other factors. These investments are subject to significant fluctuations in fair value due to the volatility of the securities markets and of the underlying businesses. In general, the debt instruments held in our strategic marketable investment securities portfolio are not significantly impacted by interest rate fluctuations as their value is more closely related to factors specific to the underlying business. A hypothetical 10% adverse change in the price of our public strategic debt and equity investments would result in a decrease of approximately \$1 million in the fair value of these investments.

Restricted Cash, Cash Equivalents and Marketable Investment Securities

As of December 31, 2016, we had \$82 million of restricted cash and marketable investment securities invested in: (a) cash; (b) money market funds; (c) debt instruments of the United States Government and its agencies; and/or (d) instruments with similar risk, duration and credit quality characteristics to commercial paper. Based on our December 31, 2016 investment portfolio, a hypothetical 10% increase in average interest rates would not have a material impact in the fair value of our restricted cash and marketable investment securities.

Long-Term Debt

As of December 31, 2016, we had long-term debt of \$17.148 billion, excluding capital lease obligations and unamortized deferred financing costs and debt discounts, on our Consolidated Balance Sheets. We estimated the fair value of this debt to be approximately \$18.452 billion using quoted market prices. The fair value of our debt is affected by fluctuations in interest rates. A hypothetical 10% decrease in assumed interest rates would increase the fair value of our debt by approximately \$373 million. To the extent interest rates increase, our future costs of financing would increase at the time of any future financings. As of December 31, 2016, all of our long-term debt consisted of fixed rate indebtedness.

Derivative Financial Instruments

From time to time, we invest in speculative financial instruments, including derivatives. As of December 31, 2016, we did not hold any derivative financial instruments.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our consolidated financial statements are included in this Annual Report on Form 10-K beginning on page F-1.

Our selected quarterly financial data for each of the quarterly periods ended March 31, June 30, September 30 and December 31 for 2016 and 2015 is included in Note 17 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

Item 9A. CONTROLS AND PROCEDURES

Disclosure controls and procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934) as of the end of the period covered by this report. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report.

Changes in internal control over financial reporting

There has been no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

Our internal control over financial reporting includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of our assets;
- (ii) provide reasonable assurance that our transactions are recorded as necessary to permit preparation of our financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and our directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with policies or procedures may deteriorate.

Our management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2016.

The effectiveness of our internal control over financial reporting as of December 31, 2016 has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their report which appears in Item 15(a) of this Annual Report on Form 10-K.

Item 9B. OTHER INFORMATION

None

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item will be set forth in our Proxy Statement for the 2017 Annual Meeting of Shareholders, which information is hereby incorporated herein by reference.

The information required by this Item with respect to the identity and business experience of our executive officers is set forth on page 22 of this Annual Report on Form 10-K under the caption "Executive Officers of the Registrant."

Item 11. EXECUTIVE COMPENSATION

The information required by this Item will be set forth in our Proxy Statement for the 2017 Annual Meeting of Shareholders, which information is hereby incorporated herein by reference.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item will be set forth in our Proxy Statement for the 2017 Annual Meeting of Shareholders, which information is hereby incorporated herein by reference.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item will be set forth in our Proxy Statement for the 2017 Annual Meeting of Shareholders, which information is hereby incorporated herein by reference.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item will be set forth in our Proxy Statement for the 2017 Annual Meeting of Shareholders, which information is hereby incorporated herein by reference.

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

(1) *Financial Statements*

	<u>Page</u>
Report of KPMG LLP, Independent Registered Public Accounting Firm	F-2
Consolidated Balance Sheets at December 31, 2016 and 2015	F-3
Consolidated Statements of Operations and Comprehensive Income (Loss) for the years ended December 31, 2016, 2015 and 2014	F-4
Consolidated Statements of Changes in Stockholders' Equity (Deficit) for the years ended December 31, 2014, 2015 and 2016	F-5
Consolidated Statements of Cash Flows for the years ended December 31, 2016, 2015 and 2014	F-7
Notes to Consolidated Financial Statements	F-8

(2) *Financial Statement Schedules*

None. All schedules have been included in the consolidated financial statements or notes thereto.

(3) *Exhibits*

- 3.1(a)* Amended and Restated Articles of Incorporation of DISH Network Corporation (incorporated by reference to Exhibit 3.1(a) on the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended June 30, 2003, Commission File No. 0-26176), as amended by the Certificate of Amendment to the Articles of Incorporation of DISH Network Corporation (incorporated by reference to Annex 1 on DISH Network Corporation's Definitive Information Statement on Schedule 14C filed on December 31, 2007, Commission File No. 0-26176) and as further amended by the Certificate of Amendment to the Articles of Incorporation of DISH Network Corporation, effective November 3, 2015 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of DISH Network Corporation filed November 3, 2015, Commission File No. 0-26176).
- 3.1(b)* Amended and Restated Bylaws of DISH Network Corporation (incorporated by reference to Exhibit 3.1 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended September 30, 2014, Commission File No. 0-26176).

- 3.2(a)* Articles of Incorporation of DISH DBS Corporation (incorporated by reference to Exhibit 3.4(a) to the Registration Statement on Form S-4 of DISH DBS Corporation, Registration No. 333-31929), as amended by the Certificate of Amendment of the Articles of Incorporation of DISH DBS Corporation, dated as of August 25, 2003 (incorporated by reference to Exhibit 3.1(b) to the Annual Report on Form 10-K of DISH DBS Corporation for the year ended December 31, 2003, Commission File No. 333-31929), and as further amended by the Amendment of the Articles of Incorporation of DISH DBS Corporation, effective December 12, 2008 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of DISH DBS Corporation filed December 12, 2008, Registration No. 333-31929).
- 3.2(b)* Bylaws of DISH DBS Corporation (incorporated by reference to Exhibit 3.4(b) to the Registration Statement on Form S-4 of DISH DBS Corporation, Registration No. 333-31929).
- 4.1* Registration Rights Agreement by and between DISH Network Corporation and Charles W. Ergen (incorporated by reference to Exhibit 4.8 to the Registration Statement on Form S-1 of DISH Network Corporation, Registration No. 33-91276).
- 4.2* Indenture, relating to the 4 5/8% Senior Notes due 2017, dated as of May 16, 2012 among DISH DBS Corporation, the guarantors named on the signature pages thereto and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of DISH Network Corporation filed May 16, 2012, Commission File No. 0-26176).
- 4.3* Indenture, relating to the 4.250% Senior Notes due 2018, dated as of April 5, 2013, among DISH DBS Corporation, the guarantors named on the signature pages thereto and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K of DISH Network Corporation filed April 5, 2013, Commission File No. 0-26176).
- 4.4* Indenture, relating to the 7 7/8% Senior Notes Due 2019, dated as of August 17, 2009 between DISH DBS Corporation and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of DISH Network Corporation filed August 18, 2009, Commission File No. 0-26176).
- 4.5* Indenture, relating to the 5.125% Senior Notes due 2020, dated as of April 5, 2013, among DISH DBS Corporation, the guarantors named on the signature pages thereto and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of DISH Network Corporation filed April 5, 2013, Commission File No. 0-26176).
- 4.6* Indenture, relating to the 6.75% Senior Notes due 2021, dated as of May 5, 2011, among DISH DBS Corporation, the guarantors named on the signature pages thereto and Wells Fargo Bank, National Association, as trustee (incorporated by reference from Exhibit 4.1 to the Current Report on Form 8-K of DISH Network Corporation filed May 5, 2011, Commission File No. 000-26176).
- 4.7* Indenture, relating to the 5 7/8% Senior Notes due 2022, dated as of May 16, 2012 among DISH DBS Corporation, the guarantors named on the signature pages thereto and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K of DISH Network Corporation filed May 16, 2012, Commission File No. 0-26176).
- 4.8* Indenture, relating to the 5% Senior Notes due 2023, dated as of December 27, 2012 among DISH DBS Corporation, the guarantors named on the signature pages thereto and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of DISH Network Corporation filed December 27, 2012, Commission File No. 0-26176).
- 4.9* Indenture, relating to the 5 7/8% Senior Notes due 2024, dated as of November 20, 2014 among DISH DBS Corporation, the guarantors named on the signature pages thereto and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of DISH Network Corporation filed November 21, 2014, Commission File No. 0-26176).

- 4.10* Indenture, relating to the 7 3/4% Senior Notes due 2026, dated as of June 13, 2016, among DISH DBS Corporation, the guarantors named on the signature pages thereto and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of DISH Network Corporation filed June 13, 2016, Commission File No. 0-26176).
- 4.11* Indenture, relating to the 3 3/8% Convertible Notes due 2026, dated as of August 8, 2016, by and between DISH Network Corporation and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of DISH Network Corporation filed August 8, 2016, Commission File No. 0-26176).
- 10.1* 2002 Class B CEO Stock Option Plan (incorporated by reference to Appendix A to DISH Network Corporation's Definitive Proxy Statement on Schedule 14A dated April 9, 2002). **
- 10.2* Satellite Service Agreement, dated as of March 21, 2003, between SES Americom, Inc., DISH Network L.L.C. and DISH Network Corporation (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2003, Commission File No. 0-26176). ***
- 10.3* Amendment No. 1 to Satellite Service Agreement dated March 31, 2003 between SES Americom Inc. and DISH Network Corporation (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended September 30, 2003, Commission File No. 0-26176). ***
- 10.4* Satellite Service Agreement, dated February 19, 2004, between SES Americom, Inc. and DISH Network Corporation (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2004, Commission File No. 0-26176). ***
- 10.5* Amendment No. 1 to Satellite Service Agreement, dated March 10, 2004, between SES Americom, Inc. and DISH Network Corporation (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2004, Commission File No. 0-26176). ***
- 10.6* Amendment No. 3 to Satellite Service Agreement, dated February 19, 2004, between SES Americom, Inc. and DISH Network Corporation (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2004, Commission File No. 0-26176). ***
- 10.7* Whole RF Channel Service Agreement, dated February 4, 2004, between Telesat Canada and DISH Network Corporation (incorporated by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2004, Commission File No. 0-26176). ***
- 10.8* Letter Amendment to Whole RF Channel Service Agreement, dated March 25, 2004, between Telesat Canada and DISH Network Corporation (incorporated by reference to Exhibit 10.5 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2004, Commission File No. 0-26176). ***
- 10.9* Amendment No. 2 to Satellite Service Agreement, dated April 30, 2004, between SES Americom, Inc. and DISH Network Corporation (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended June 30, 2004, Commission File No. 0-26176). ***
- 10.10* Second Amendment to Whole RF Channel Service Agreement, dated May 5, 2004, between Telesat Canada and DISH Network Corporation (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended June 30, 2004, Commission File No. 0-26176). ***
- 10.11* Third Amendment to Whole RF Channel Service Agreement, dated October 12, 2004, between Telesat Canada and DISH Network Corporation (incorporated by reference to Exhibit 10.22 to the Annual Report on Form 10-K of DISH Network Corporation for the year ended December 31, 2004, Commission File No. 0-26176). ***

- 10.12* Amendment No. 4 to Satellite Service Agreement, dated October 21, 2004, between SES Americom, Inc. and DISH Network Corporation (incorporated by reference to Exhibit 10.23 to the Annual Report on Form 10-K of DISH Network Corporation for the year ended December 31, 2004, Commission File No. 0-26176). ***
- 10.13* Amendment No. 3 to Satellite Service Agreement, dated November 19, 2004 between SES Americom, Inc. and DISH Network Corporation (incorporated by reference to Exhibit 10.24 to the Annual Report on Form 10-K of DISH Network Corporation for the year ended December 31, 2004, Commission File No. 0-26176). ***
- 10.14* Amendment No. 5 to Satellite Service Agreement, dated November 19, 2004, between SES Americom, Inc. and DISH Network Corporation (incorporated by reference to Exhibit 10.25 to the Annual Report on Form 10-K of DISH Network Corporation for the year ended December 31, 2004, Commission File No. 0-26176). ***
- 10.15* Amendment No. 6 to Satellite Service Agreement, dated December 20, 2004, between SES Americom, Inc. and DISH Network Corporation (incorporated by reference to Exhibit 10.26 to the Annual Report on Form 10-K of DISH Network Corporation for the year ended December 31, 2004, Commission File No. 0-26176). ***
- 10.16* Amendment No. 4 to Satellite Service Agreement, dated April 6, 2005, between SES Americom, Inc. and DISH Network Corporation (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended June 30, 2005, Commission File No. 0-26176). ***
- 10.17* Amendment No. 5 to Satellite Service Agreement, dated June 20, 2005, between SES Americom, Inc. and DISH Network Corporation (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended June 30, 2005, Commission File No. 0-26176). ***
- 10.18* Incentive Stock Option Agreement (Form A) (incorporated by reference to Exhibit 99.1 to the Current Report on Form 8-K of DISH Network Corporation filed July 7, 2005, Commission File No. 0-26176). **
- 10.19* Incentive Stock Option Agreement (Form B) (incorporated by reference to Exhibit 99.2 to the Current Report on Form 8-K of DISH Network Corporation filed July 7, 2005, Commission File No. 0-26176). **
- 10.20* Restricted Stock Unit Agreement (Form A) (incorporated by reference to Exhibit 99.3 to the Current Report on Form 8-K of DISH Network Corporation filed July 7, 2005, Commission File No. 0-26176). **
- 10.21* Restricted Stock Unit Agreement (Form B) (incorporated by reference to Exhibit 99.4 to the Current Report on Form 8-K of DISH Network Corporation filed July 7, 2005, Commission File No. 0-26176). **
- 10.22* Nonemployee Director Stock Option Agreement (incorporated by reference to Exhibit 99.6 to the Current Report on Form 8-K of DISH Network Corporation filed July 7, 2005, Commission File No. 0-26176). **
- 10.23* Separation Agreement between EchoStar Corporation and DISH Network Corporation (incorporated by reference from Exhibit 2.1 to the Amendment No. 1 to the Form 10 of EchoStar Corporation filed December 12, 2007, Commission File No. 001-33807).
- 10.24* Tax Sharing Agreement between EchoStar Corporation and DISH Network Corporation (incorporated by reference from Exhibit 10.2 to the Amendment No. 1 to the Form 10 of EchoStar Corporation filed December 12, 2007, Commission File No. 001-33807).
- 10.25* Employee Matters Agreement between EchoStar Corporation and DISH Network Corporation (incorporated by reference from Exhibit 10.3 to the Amendment No. 1 to the Form 10 of EchoStar Corporation filed December 12, 2007, Commission File No. 001-33807).

- 10.26* Intellectual Property Matters Agreement between EchoStar Corporation, EchoStar Acquisition L.L.C., Echosphere L.L.C., DISH DBS Corporation, EIC Spain SL, EchoStar Technologies L.L.C. and DISH Network Corporation (incorporated by reference from Exhibit 10.4 to the Amendment No. 1 to the Form 10 of EchoStar Corporation filed December 12, 2007, Commission File No. 001-33807).
- 10.27* Form of Satellite Capacity Agreement between EchoStar Corporation and DISH Network L.L.C. (incorporated by reference from Exhibit 10.28 to the Amendment No. 2 to Form 10 of EchoStar Corporation filed December 26, 2007, Commission File No. 001-33807).
- 10.28* Description of the 2008 Long-Term Incentive Plan dated December 22, 2008 (incorporated by reference to Exhibit 10.42 to the Annual Report on Form 10-K of DISH Network Corporation for the year ended December 31, 2008, Commission File No. 0-26176). **
- 10.29* DISH Network Corporation 2009 Stock Incentive Plan (incorporated by reference to Appendix A to DISH Network Corporation's Definitive Proxy Statement on Form 14A filed September 19, 2014, Commission File No. 000-26176). **
- 10.30* Amended and Restated DISH Network Corporation 2001 Nonemployee Director Stock Option Plan (incorporated by reference to Appendix B to DISH Network Corporation's Definitive Proxy Statement on Form 14A filed March 31, 2009, Commission File No. 000-26176). **
- 10.31* Amended and Restated DISH Network Corporation 1999 Stock Incentive Plan (incorporated by reference to Appendix C to DISH Network Corporation's Definitive Proxy Statement on Form 14A filed March 31, 2009, Commission File No. 000-26176). **
- 10.32* NIMIQ 5 Whole RF Channel Service Agreement, dated September 15, 2009, between Telesat Canada and EchoStar Corporation (incorporated by reference from Exhibit 10.30 to the Annual Report on Form 10-K of EchoStar Corporation for the year ended December 31, 2009, Commission File No. 001-33807). ***
- 10.33* NIMIQ 5 Whole RF Channel Service Agreement, dated September 15, 2009, between EchoStar Corporation and DISH Network L.L.C. (incorporated by reference from Exhibit 10.31 to the Annual Report on Form 10-K of EchoStar Corporation for the year ended December 31, 2009, Commission File No. 001-33807). ***
- 10.34* Professional Services Agreement, dated August 4, 2009, between EchoStar Corporation and DISH Network Corporation (incorporated by reference from Exhibit 10.3 to the Quarterly Report on Form 10-Q of EchoStar Corporation for the quarter ended September 30, 2009, Commission File No. 001-33807). ***
- 10.35* Allocation Agreement, dated August 4, 2009, between EchoStar Corporation and DISH Network Corporation (incorporated by reference from Exhibit 10.4 to the Quarterly Report on Form 10-Q of EchoStar Corporation for the quarter ended September 30, 2009, Commission File No. 001-33807).
- 10.36* Amendment to Form of Satellite Capacity Agreement (Form A) between EchoStar Corporation and DISH Network L.L.C. (incorporated by reference from Exhibit 10.34 to the Annual Report on Form 10-K of EchoStar Corporation for the year ended December 31, 2009, Commission File No. 001-33807).
- 10.37* Amendment to Form of Satellite Capacity Agreement (Form B) between EchoStar Corporation and DISH Network L.L.C. (incorporated by reference from Exhibit 10.35 to the Annual Report on Form 10-K of EchoStar Corporation for the year ended December 31, 2009, Commission File No. 001-33807).
- 10.38* EchoStar XVI Satellite Capacity Agreement between EchoStar Satellite Services L.L.C. and DISH Network L.L.C. (incorporated by reference from Exhibit 10.36 to the Annual Report on Form 10-K of EchoStar Corporation for the year ended December 31, 2009, Commission File No. 001-33807). ***

- 10.39* Amended and Restated Investment Agreement, dated as of February 24, 2011, and First Amendment to Amended and Restated Investment Agreement, dated as of March 15, 2011, between DISH Network Corporation and DBSD North America, Inc. (incorporated by reference from Exhibit 10.1 to the Current Report on Form 8-K of ICO Global Communications (Holdings) Limited filed March 17, 2011, Commission File No. 001-33008).
- 10.40* Implementation Agreement, dated as of March 15, 2011, between DISH Network and ICO Global Communications (Holdings) Limited (incorporated by reference from Exhibit 10.2 to the Current Report on Form 8-K of ICO Global Communications (Holdings) Limited filed March 17, 2011, Commission File No. 001-33008).
- 10.41* Restructuring Support Agreement, dated as of March 15, 2011, between DISH Network and ICO Global Communications (Holdings) Limited (incorporated by reference from Exhibit 10.3 to the Current Report on Form 8-K of ICO Global Communications (Holdings) Limited filed March 17, 2011, Commission File No. 001-33008).
- 10.42* Purchase Agreement, dated as of June 14, 2011, by and among TerreStar Networks Inc., TerreStar License Inc., TerreStar National Services Inc., TerreStar Networks Holdings (Canada) Inc., TerreStar Networks (Canada) Inc., 0887729 B.C. Ltd., and Gamma Acquisition L.L.C. and DISH Network Corporation (solely with respect to Section 6.19 thereof) (incorporated by reference from Exhibit 99.1 to the Current Report on Form 8-K of DISH Network Corporation filed June 16, 2011, Commission File No. 000-26176).
- 10.43* Cost Allocation Agreement, dated April 29, 2011, between EchoStar and DISH Network (incorporated by reference from Exhibit 10.2 to the Quarterly Report on Form 10-Q of EchoStar for the quarter ended June 30, 2011, Commission File No. 001-33807).
- 10.44* Settlement and Patent License between TiVo Inc. and DISH Network Corporation and EchoStar Corporation, dated as of April 29, 2011 (incorporated by reference to Exhibit 10.9 to the Quarterly Report on Form 10-Q/A of EchoStar Corporation filed February 21, 2012, Commission File No. 001-33807). ***
- 10.45* QuetzSat-1 Transponder Service Agreement, dated November 24, 2008, between EchoStar 77 Corporation, a direct wholly-owned subsidiary of EchoStar, and DISH Network L.L.C. (incorporated by reference to Exhibit 10.25 to the Annual Report on Form 10-K of EchoStar Corporation for the year ended December 31, 2009, Commission File No. 001-33807). ***
- 10.46* Receiver Agreement dated January 1, 2012 between Echosphere L.L.C. and EchoStar Technologies L.L.C. (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2012, Commission File No. 0-26176). ***
- 10.47* Broadcast Agreement dated January 1, 2012 between EchoStar Broadcasting Corporation and DISH Network L.L.C. (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2012, Commission File No. 0-26176). ***
- 10.48* Confidential Settlement Agreement and Release dated as of October 21, 2012 by and between Voom HD Holdings LLC and CSC Holdings, LLC, on the one hand, and DISH Network L.L.C., on the other hand, and for certain limited purposes, DISH Media Holdings Corporation, MSG Holdings, L.P., The Madison Square Garden Company and EchoStar Corporation (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended September 30, 2012, Commission File No. 0-26176). ***
- 10.49* Description of the 2013 Long-Term Incentive Plan dated November 30, 2012 (incorporated by reference to the Current Report on Form 8-K of DISH Network Corporation filed December 6, 2012, Commission File No. 000-26176). **
- 10.50* Amendment to EchoStar XVI Satellite Capacity Agreement between EchoStar Satellite Services L.L.C. and DISH Network L.L.C. dated December 21, 2012 (incorporated by reference to Exhibit 10.62 to the Annual Report on Form 10-K of DISH Network Corporation for the year ended December 31, 2012, Commission File No. 0-26176). ***

- 10.51* Transaction Agreement, dated February 20, 2014, by and among EchoStar Corporation, Hughes Satellite Systems Corporation, Alpha Company LLC, DISH Network L.L.C., DISH Operating L.L.C. and EchoStar XI Holding L.L.C. (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2014, Commission File No. 0-26176). ***
- 10.52* Investor Rights Agreement, dated February 20, 2014, by and among EchoStar Corporation, Hughes Satellite Systems Corporation, DISH Operating L.L.C. and DISH Network L.L.C. (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2014, Commission File No. 0-26176). ***
- 10.53* Form of Satellite Capacity Agreement between EchoStar Satellite Operating Corporation and DISH Operating L.L.C. (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2014, Commission File No. 0-26176).***
- 10.54* First Amended and Restated Credit Agreement dated October 13, 2014, among American AWS-3 Wireless II L.L.C., Northstar Wireless, LLC and Northstar Spectrum, LLC, as amended on February 12, 2015 (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2015, Commission File No. 0-26176). ***
- 10.55* First Amended and Restated Credit Agreement dated October 13, 2014, among American AWS-3 Wireless III L.L.C., SNR Wireless LicenseCo, LLC and SNR Wireless HoldCo, LLC, as amended on February 12, 2015 (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2015, Commission File No. 0-26176). ***
- 10.56* First Amended and Restated Limited Liability Company Agreement dated October 13, 2014, among Northstar Spectrum, LLC, Northstar Manager, LLC and American AWS-3 Wireless II L.L.C., as amended on February 12, 2015 (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2015, Commission File No. 0-26176). ***
- 10.57* First Amended and Restated Limited Liability Company Agreement dated October 13, 2014, among SNR Wireless HoldCo, LLC, SNR Wireless Management, LLC and American AWS-3 Wireless III L.L.C., as amended on February 12, 2015 (incorporated by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2015, Commission File No. 0-26176). ***
- 10.58* Management Services Agreement dated September 12, 2014, between American AWS-3 Wireless II L.L.C. and Northstar Wireless, LLC (incorporated by reference to Exhibit 10.5 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2015, Commission File No. 0-26176). ***
- 10.59* Management Services Agreement dated September 12, 2014, between American AWS-3 Wireless III L.L.C. and SNR Wireless LicenseCo, LLC (incorporated by reference to Exhibit 10.6 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2015, Commission File No. 0-26176).***
- 10.60* Second Amendment, dated October 1, 2015, to the First Amended and Restated Credit Agreement dated October 13, 2014, among American AWS-3 Wireless II L.L.C., Northstar Wireless, LLC and Northstar Spectrum, LLC, as first amended on February 12, 2015 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K of DISH Network Corporation filed October 2, 2015, Commission File No. 0-26176).
- 10.61* Guaranty of Certain Obligations to FCC, dated as of October 1, 2015, made by DISH Network Corporation in favor of the Federal Communications Commission (Northstar Wireless) (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K of DISH Network Corporation filed October 2, 2015, Commission File No. 0-26176).
- 10.62* Second Amendment, dated October 1, 2015, to the First Amended and Restated Credit Agreement dated October 13, 2014, among American AWS-3 Wireless III L.L.C., SNR Wireless LicenseCo, LLC and SNR Wireless HoldCo, LLC, as first amended on February 12, 2015 (incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K of DISH Network Corporation filed October 2, 2015, Commission File No. 0-26176).

- 10.63* Guaranty of Certain Obligations to FCC, dated as of October 1, 2015, made by DISH Network Corporation in favor of the Federal Communications Commission (SNR Wireless) (incorporated by reference to Exhibit 10.4 to the Current Report on Form 8-K of DISH Network Corporation filed October 2, 2015, Commission File No. 0-26176).
- 10.64* Second Amendment to Receiver Agreement dated November 4, 2015, between Echosphere L.L.C. and EchoStar Technologies L.L.C.
- 10.65* Form of Base/Additional Note Hedge Transaction Confirmation (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K of DISH Network Corporation filed August 8, 2016, Commission File No. 0-26176).
- 10.66* Form of Base/Additional Warrant Transaction Confirmation (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K of DISH Network Corporation filed August 8, 2016, Commission File No. 0-26176).
- 10.67☐ Third Amendment to Receiver Agreement dated November 4, 2016, between Echosphere L.L.C. and EchoStar Technologies L.L.C.
- 10.68☐ First Amendment to Broadcast Agreement dated November 4, 2016, between EchoStar Broadcasting Corporation and DISH Network L.L.C.
- 21☐ Subsidiaries of DISH Network Corporation.
- 23☐ Consent of KPMG LLP, Independent Registered Public Accounting Firm.
- 24☐ Power of Attorney authorizing R. Stanton Dodge as signatory for George R. Brokaw, James DeFranco, Cantey M. Ergen, Steven R. Goodbarn, Charles M. Lillis, Afshin Mohebbi, David K. Moskowitz, Tom A. Ortolf and Carl E. Vogel.
- 31.1☐ Section 302 Certification of Chief Executive Officer.
- 31.2☐ Section 302 Certification of Chief Financial Officer.
- 32.1☐ Section 906 Certification of Chief Executive Officer.
- 32.2☐ Section 906 Certification of Chief Financial Officer.
- 101 ☐ The following materials from the Annual Report on Form 10-K of DISH Network Corporation for the year ended December 31, 2016, filed on February 22, 2017, formatted in eXtensible Business Reporting Language (“XBRL”): (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations and Comprehensive Income (Loss), (iii) Consolidated Statement of Changes in Stockholders’ Equity (Deficit), (iv) Consolidated Statements of Cash Flows, and (v) related notes to these financial statements.

☐ Filed herewith.

* Incorporated by reference.

** Constitutes a management contract or compensatory plan or arrangement.

*** Certain portions of the exhibit have been omitted and separately filed with the Securities and Exchange Commission with a request for confidential treatment.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

DISH NETWORK CORPORATION

By: /s/ Steven E. Swain

Steven E. Swain

Senior Vice President and Chief Financial Officer

Date: February 22, 2017

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Charles W. Ergen</u> Charles W. Ergen	Chairman and Chief Executive Officer (Principal Executive Officer)	February 22, 2017
<u>/s/ Steven E. Swain</u> Steven E. Swain	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 22, 2017
<u>/s/ Paul W. Orban</u> Paul W. Orban	Senior Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 22, 2017
* <u>George R. Brokaw</u>	Director	February 22, 2017
* <u>James DeFranco</u>	Director	February 22, 2017
* <u>Cantey M. Ergen</u>	Director	February 22, 2017
* <u>Steven R. Goodbarn</u>	Director	February 22, 2017
* <u>Charles M. Lillis</u>	Director	February 22, 2017
* <u>Afshin Mohebbi</u>	Director	February 22, 2017
* <u>David K. Moskowitz</u>	Director	February 22, 2017
* <u>Tom A. Ortolf</u>	Director	February 22, 2017
* <u>Carl E. Vogel</u>	Director	February 22, 2017

* By: /s/ R. Stanton Dodge

R. Stanton Dodge

Attorney-in-Fact

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
DISH Network Corporation:

We have audited the accompanying consolidated balance sheets of DISH Network Corporation and subsidiaries (the Company) as of December 31, 2016 and 2015, and the related consolidated statements of operations and comprehensive income (loss), changes in stockholders' equity (deficit), and cash flows for each of the years in the three-year period ended December 31, 2016. We also have audited DISH Network Corporation's internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). DISH Network Corporation's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management's Annual Report on Internal Control Over Financial Reporting*. Our responsibility is to express an opinion on these consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the consolidated financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of DISH Network Corporation and subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles. Also in our opinion, DISH Network Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

/s/ KPMG LLP

Denver, Colorado
February 22, 2017

DISH NETWORK CORPORATION
CONSOLIDATED BALANCE SHEETS
(Dollars in thousands, except share amounts)

	As of	
	December 31, 2016	December 31, 2015
Assets		
<i>Current Assets:</i>		
Cash and cash equivalents	\$ 5,323,725	\$ 1,053,158
Marketable investment securities	35,616	557,911
Trade accounts receivable, net of allowance for doubtful accounts of \$17,955 and \$22,167, respectively	753,129	864,028
Inventory	464,835	390,328
Derivative financial instruments (Note 2)	—	556,828
Other current assets (Note 8)	1,705,749	120,990
Total current assets	8,283,054	3,543,243
<i>Noncurrent Assets:</i>		
Restricted cash, cash equivalents and marketable investment securities	82,360	82,374
Property and equipment, net	2,557,382	2,924,180
FCC authorizations	16,498,733	15,667,604
Other investment securities	324,371	327,250
Other noncurrent assets, net	345,947	342,059
Total noncurrent assets	19,808,793	19,343,467
Total assets	\$ 28,091,847	\$ 22,886,710
Liabilities and Stockholders' Equity (Deficit)		
<i>Current Liabilities:</i>		
Trade accounts payable	\$ 505,986	\$ 470,226
Deferred revenue and other	772,831	869,659
Accrued programming	1,542,036	1,532,809
Accrued interest	305,721	224,513
Other accrued expenses	463,831	531,733
Current portion of long-term debt and capital lease obligations	937,580	1,534,000
Total current liabilities	4,527,985	5,162,940
<i>Long-Term Obligations, Net of Current Portion:</i>		
Long-term debt and capital lease obligations, net of current portion	15,541,320	12,221,925
Deferred tax liabilities	2,595,481	2,084,789
Long-term deferred revenue and other long-term liabilities	461,534	385,026
Total long-term obligations, net of current portion	18,598,335	14,691,740
Total liabilities	23,126,320	19,854,680
Commitments and Contingencies (Note 14)		
Redeemable noncontrolling interests (Note 2)		
	330,634	284,243
<i>Stockholders' Equity (Deficit):</i>		
Class A common stock, \$.01 par value, 1,600,000,000 shares authorized, 226,812,205 and 281,866,884 shares issued, 226,812,205 and 225,748,624 shares outstanding, respectively	2,268	2,819
Class B common stock, \$.01 par value, 800,000,000 shares authorized, 238,435,208 shares issued and outstanding	2,384	2,384
Additional paid-in capital	3,279,646	2,779,978
Accumulated other comprehensive income (loss)	781	61,981
Accumulated earnings (deficit) (Note 11)	1,352,040	1,471,084
Treasury stock, at cost (Note 11)	—	(1,569,459)
Total DISH Network stockholders' equity (deficit)	4,637,119	2,748,787
Noncontrolling interests	(2,226)	(1,000)
Total stockholders' equity (deficit)	4,634,893	2,747,787
Total liabilities and stockholders' equity (deficit)	\$ 28,091,847	\$ 22,886,710

The accompanying notes are an integral part of these consolidated financial statements.

DISH NETWORK CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)
(Dollars in thousands, except per share amounts)

	For the Years Ended December 31,		
	2016	2015	2014
Revenue:			
Subscriber-related revenue	\$ 15,033,939	\$ 14,953,559	\$ 14,495,091
Equipment sales and other revenue	60,623	115,342	148,296
Total revenue	15,094,562	15,068,901	14,643,387
Costs and Expenses (exclusive of depreciation shown separately below - Note 8):			
Subscriber-related expenses	8,887,437	8,783,009	8,313,046
Satellite and transmission expenses	726,791	762,832	693,114
Cost of sales - equipment and other	61,915	91,654	107,777
<i>Subscriber acquisition costs:</i>			
Cost of sales - subscriber promotion subsidies	157,955	194,305	255,913
Other subscriber acquisition costs	709,772	908,983	988,718
Subscriber acquisition advertising	603,213	579,260	566,687
Total subscriber acquisition costs	1,470,940	1,682,548	1,811,318
General and administrative expenses	783,224	777,507	815,745
FCC auction expense (Note 14)	—	515,555	—
Depreciation and amortization (Note 8)	953,146	1,000,048	1,077,936
Impairment of long-lived assets (Note 8)	—	123,352	—
Total costs and expenses	12,883,453	13,736,505	12,818,936
Operating income (loss)	2,211,109	1,332,396	1,824,451
Other Income (Expense):			
Interest income	31,164	19,523	61,841
Interest expense, net of amounts capitalized	(52,992)	(494,010)	(611,209)
Other, net	117,182	278,043	(69,341)
Total other income (expense)	95,354	(196,444)	(618,709)
Income (loss) before income taxes	2,306,463	1,135,952	1,205,742
Income tax (provision) benefit, net	(837,009)	(366,676)	(276,840)
Net income (loss)	1,469,454	769,276	928,902
Less: Net income (loss) attributable to noncontrolling interests, net of tax	19,601	22,184	(15,791)
Net income (loss) attributable to DISH Network	\$ 1,449,853	\$ 747,092	\$ 944,693
Weighted-average common shares outstanding - Class A and B common stock:			
Basic	464,807	462,995	460,126
Diluted	484,162	464,697	462,927
Earnings per share - Class A and B common stock:			
Basic net income (loss) per share attributable to DISH Network	\$ 3.12	\$ 1.61	\$ 2.05
Diluted net income (loss) per share attributable to DISH Network	\$ 3.05	\$ 1.61	\$ 2.04
Comprehensive Income (Loss):			
Net income (loss)	\$ 1,469,454	\$ 769,276	\$ 928,902
<i>Other comprehensive income (loss):</i>			
Foreign currency translation adjustments	—	—	3,878
Unrealized holding gains (losses) on available-for-sale securities	3,050	20,205	(11,729)
Recognition of previously unrealized (gains) losses on available-for-sale securities included in net income (loss)	(99,312)	(99,361)	7,050
Deferred income tax (expense) benefit, net	35,062	(33,370)	1,436
Total other comprehensive income (loss), net of tax	(61,200)	(112,526)	635
Comprehensive income (loss)	1,408,254	656,750	929,537
Less: Comprehensive income (loss) attributable to noncontrolling interests, net of tax	19,601	22,184	(15,791)
Comprehensive income (loss) attributable to DISH Network	\$ 1,388,653	\$ 634,566	\$ 945,328

The accompanying notes are an integral part of these consolidated financial statements.

DISH NETWORK CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT)
(In thousands)

	Class A and B Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Earnings (Deficit)	Treasury Stock	Noncontrolling Interests	Total	Redeemable Noncontrolling Interests
Balance, December 31, 2013	\$ 5,144	\$ 2,588,224	\$ 173,872	\$ (220,701)	\$ (1,569,459)	\$ 19,925	\$ 997,005	\$ —
Issuance of Class A common stock:								
Exercise of stock awards	29	44,719	—	—	—	—	44,748	—
Employee benefits	4	25,777	—	—	—	—	25,781	—
Employee Stock Purchase Plan	1	6,185	—	—	—	—	6,186	—
Non-cash, stock-based compensation	—	34,055	—	—	—	71	34,126	27
Income tax (expense) benefit related to stock awards and other	—	41,707	—	—	—	(691)	41,016	—
Change in unrealized holding gains (losses) on available-for-sale securities, net	—	—	(4,679)	—	—	—	(4,679)	—
Deferred income tax (expense) benefit attributable to unrealized gains (losses) on available-for-sale securities	—	—	1,436	—	—	—	1,436	—
Foreign currency translation	—	—	3,878	—	—	—	3,878	—
Capital distribution to EchoStar - Satellite and Tracking	—	(51,466)	—	—	—	—	(51,466)	—
Stock Transaction, net of deferred taxes of \$31,274	—	—	—	—	—	—	—	—
Sling TV Exchange Agreement with EchoStar:								
Capital distribution to EchoStar, net of deferred taxes of \$3,542	—	(5,845)	—	—	—	(6,118)	(11,963)	—
Deemed distribution to EchoStar - initial fair value of redeemable noncontrolling interest, net of deferred taxes of \$8,489	—	(14,011)	—	—	—	—	(14,011)	22,500
Capital contribution from EchoStar - sale of T2 satellite net of deferred taxes of \$5,554	—	9,446	—	—	—	—	9,446	—
Redeemable noncontrolling interest recognized - investment in Northstar Spectrum and SNR Holdco	—	—	—	—	—	—	—	20,700
Net income (loss) attributable to noncontrolling interests	—	—	—	—	—	(14,062)	(14,062)	(1,729)
Net income (loss) attributable to DISH Network	—	—	—	944,693	—	—	944,693	—
Balance, December 31, 2014	\$ 5,178	\$ 2,678,791	\$ 174,507	\$ 723,992	\$ (1,569,459)	\$ (875)	\$ 2,012,134	\$ 41,498
Issuance of Class A common stock:								
Exercise of stock awards	20	25,744	—	—	—	—	25,764	—
Employee benefits	4	26,022	—	—	—	—	26,026	—
Employee Stock Purchase Plan	1	8,103	—	—	—	—	8,104	—
Non-cash, stock-based compensation	—	19,072	—	—	—	—	19,072	127
Income tax (expense) benefit related to stock awards and other	—	31,844	—	—	—	691	32,535	—
Change in unrealized holding gains (losses) on available-for-sale securities, net	—	—	(79,156)	—	—	—	(79,156)	—
Deferred income tax (expense) benefit attributable to unrealized gains (losses) on available-for-sale securities	—	—	(33,370)	—	—	—	(33,370)	—
Revaluation of EchoStar's interest in Sling TV to redemption value, net of deferred taxes of \$5,820	—	(9,598)	—	—	—	—	(9,598)	15,418
Redeemable noncontrolling interest recognized - investment in Northstar Spectrum and SNR Holdco	—	—	—	—	—	—	—	204,200
Net income (loss) attributable to noncontrolling interests	—	—	—	—	—	(816)	(816)	23,000
Net income (loss) attributable to DISH Network	—	—	—	747,092	—	—	747,092	—
Balance, December 31, 2015	\$ 5,203	\$ 2,779,978	\$ 61,981	\$ 1,471,084	\$ (1,569,459)	\$ (1,000)	\$ 2,747,787	\$ 284,243

The accompanying notes are an integral part of these consolidated financial statements.

DISH NETWORK CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT) – Continued
(In thousands)

	Class A and B Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Earnings (Deficit)	Treasury Stock (See Note 12)	Noncontrolling Interests	Total	Redeemable Noncontrolling Interests
Balance, December 31, 2015	\$ 5,203	\$ 2,779,978	\$ 61,981	\$ 1,471,084	\$ (1,569,459)	\$ (1,000)	\$ 2,747,787	\$ 284,243
Issuance of Class A common stock:								
Exercise of stock awards	5	10,067	—	—	—	—	10,072	—
Employee benefits	4	25,142	—	—	—	—	25,146	—
Employee Stock Purchase Plan	2	8,551	—	—	—	—	8,553	—
Non-cash, stock-based compensation	—	12,826	—	—	—	—	12,826	211
Change in unrealized holding gains (losses) on available-for-sale securities, net	—	—	(96,262)	—	—	—	(96,262)	—
Deferred income tax (expense) benefit attributable to unrealized gains (losses) on available-for-sale securities	—	—	35,062	—	—	—	35,062	—
Retirement of treasury stock	(562)	—	—	(1,568,897)	1,569,459	—	—	—
Issuance of warrants	—	375,600	—	—	—	—	375,600	—
Initial equity component of the 3 3/8% Convertible Notes due 2026, net of deferred taxes of \$286,322	—	487,521	—	—	—	—	487,521	—
Convertible note hedges, net of deferred taxes of \$234,987	—	(400,113)	—	—	—	—	(400,113)	—
Revaluation of EchoStar's interest in Sling TV to redemption value, net of deferred taxes of \$9,824	—	(16,130)	—	—	—	—	(16,130)	25,954
Net income (loss) attributable to noncontrolling interests	—	—	—	—	—	(625)	(625)	20,226
Net income (loss) attributable to DISH Network	—	—	—	1,449,853	—	—	1,449,853	—
Other	—	(3,796)	—	—	—	(601)	(4,397)	—
Balance, December 31, 2016	\$ 4,652	\$ 3,279,646	\$ 781	\$ 1,352,040	\$ —	\$ (2,226)	\$ 4,634,893	\$ 330,634

The accompanying notes are an integral part of these consolidated financial statements.

DISH NETWORK CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	For the Years Ended December 31,		
	2016	2015	2014
Cash Flows From Operating Activities:			
Net income (loss)	\$ 1,469,454	\$ 769,276	\$ 928,902
<i>Adjustments to reconcile net income (loss) to net cash flows from operating activities:</i>			
Depreciation and amortization	953,146	1,000,048	1,077,936
Impairment of long-lived assets	—	123,352	—
Realized and unrealized losses (gains) on investments	(119,092)	(287,250)	60,515
Non-cash, stock-based compensation	13,037	19,199	34,153
Deferred tax expense (benefit)	506,932	206,392	134,535
Change in long-term deferred revenue and other long-term liabilities	76,508	104,233	26,581
Other, net	4,354	18,323	106,772
Changes in current assets and current liabilities, net			
Trade accounts receivable	115,111	88,901	217
Allowance for doubtful accounts	(4,212)	(1,436)	7,622
Prepaid and accrued income taxes	(144,256)	64,775	85,586
Inventory	(49,560)	116,503	380
Other current assets	17,509	15,632	3,263
Trade accounts payable	35,760	56,633	(212,664)
Deferred revenue and other	(96,828)	(21,714)	46,197
Accrued programming and other accrued expenses	24,289	163,213	78,129
Net cash flows from operating activities	2,802,152	2,436,080	2,378,124
Cash Flows From Investing Activities:			
Purchases of marketable investment securities	(345,210)	(447,901)	(4,119,489)
Sales and maturities of marketable investment securities	868,792	2,054,805	7,054,104
Purchases of derivative financial instruments	—	—	(149,969)
Settlement of derivative financial instruments	562,234	—	—
Purchases of property and equipment	(603,021)	(761,694)	(1,001,861)
Capitalized interest related to FCC authorizations (Note 2)	(724,329)	(352,683)	(214,000)
Purchases of FCC authorizations (Note 14)	—	(8,970,389)	(1,343,372)
AWS-3 FCC license refunds (deposits) (Note 14)	—	400,000	(1,320,000)
Other, net (Note 8)	(1,487,130)	3,713	131,510
Net cash flows from investing activities	(1,728,664)	(8,074,149)	(963,077)
Cash Flows From Financing Activities:			
Proceeds from issuance of senior notes (Note 9)	2,000,000	—	2,000,000
Proceeds from issuance of convertible notes (Note 9)	3,000,000	—	—
Purchases of convertible note hedges (Note 9)	(635,100)	—	—
Proceeds from issuance of warrants (Note 9)	375,600	—	—
Redemption and repurchases of senior notes (Note 9)	(1,500,000)	(650,001)	(1,099,999)
Capital contributions from Northstar Manager and SNR Management (Note 14)	—	204,200	20,700
Repayment of long-term debt and capital lease obligations	(34,824)	(31,525)	(31,653)
Net proceeds from Class A common stock options exercised and stock issued under the Employee Stock Purchase Plan	18,625	33,868	50,934
Debt issuance costs	(26,622)	—	(7,677)
Other, net	(600)	30,189	47,962
Net cash flows from financing activities	3,197,079	(413,269)	980,267
Net increase (decrease) in cash and cash equivalents	4,270,567	(6,051,338)	2,395,314
Cash and cash equivalents, beginning of period	1,053,158	7,104,496	4,709,182
Cash and cash equivalents, end of period	<u>\$ 5,323,725</u>	<u>\$ 1,053,158</u>	<u>\$ 7,104,496</u>

The accompanying notes are an integral part of these consolidated financial statements.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Business Activities

Principal Business

DISH Network Corporation is a holding company. Its subsidiaries (which together with DISH Network Corporation are referred to as “DISH Network,” the “Company,” “we,” “us” and/or “our,” unless otherwise required by the context) operate two primary business segments.

Pay-TV and Broadband

We offer pay-TV services under the DISH® brand and the Sling® brand (collectively “Pay-TV” services). The DISH branded pay-TV service consists of, among other things, Federal Communications Commission (“FCC”) licenses authorizing us to use direct broadcast satellite (“DBS”) and Fixed Satellite Service (“FSS”) spectrum, our owned and leased satellites, receiver systems, third-party broadcast operations, customer service facilities, a leased fiber optic network, in-home service and call center operations, and certain other assets utilized in our operations. The Sling branded pay-TV services consist of, among other things, live, linear streaming over-the-top (“OTT”) Internet-based domestic, international and Latino video programming services (“Sling TV”). Prior to 2015, we launched our Sling International video programming service (formerly known as DishWorld), which historically represented a small percentage of our Pay-TV subscribers. In February and June 2015, we launched our Sling domestic and Sling Latino services, respectively. In addition to our original Sling domestic service that could only be streamed on one device at a time (single-stream service), in April 2016, we launched a live beta multi-stream Sling domestic service, which includes, among other things, the ability to stream on up to three devices simultaneously. In June 2016, our multi-stream Sling domestic service transitioned from its introductory beta period and was re-branded as Sling Blue. Meanwhile, we re-branded our original single-stream Sling domestic service as Sling Orange. All Sling branded pay-TV subscribers are included in our Pay-TV subscriber count. As of December 31, 2016, we had 13.671 million Pay-TV subscribers in the United States.

In addition, we market broadband services under the dishNET™ brand, which had 0.580 million subscribers in the United States as of December 31, 2016. Our satellite broadband service utilizes advanced technology and high-powered satellites launched by Hughes Communications, Inc. (“Hughes”) and ViaSat, Inc. (“ViaSat”) to provide broadband coverage nationwide. This service primarily targets rural residents that are underserved, or unserved, by wireline broadband. In addition to the dishNET branded satellite broadband service, we also offer wireline broadband services under the dishNET brand as a competitive local exchange carrier to consumers in certain areas in 34 states and wireline voice services in certain areas of 14 of these states located in the western United States. We primarily bundle our dishNET branded services with our DISH branded pay-TV service.

Wireless

DISH Network Spectrum

We have invested over \$5.0 billion since 2008 to acquire certain wireless spectrum licenses and related assets. These wireless spectrum licenses are subject to certain interim and final build-out requirements. As we consider our options for the commercialization of our wireless spectrum, we may incur significant additional expenses and may have to make significant investments related to, among other things, research and development, wireless testing and wireless network infrastructure, as well as the acquisition of additional wireless spectrum.

Auction 1000. On February 10, 2016, we filed an application with the FCC to potentially participate as a bidder in the forward auction phase of the broadcast incentive auction in the 600 MHz frequency range (“Auction 1000”). The available spectrum in each licensed geographic area in Auction 1000 is generally comprised of certain paired 5x5 spectrum blocks (5 MHz uplink spectrum and 5 MHz downlink spectrum). As a result, a nationwide footprint may be obtained by aggregating a single 5x5 spectrum block in each available licensed geographic area.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Auction 1000 has had multiple stages, with each stage having two phases. With respect to each stage, in the first phase, or reverse auction phase, participating television broadcasters “sell” their rights to use certain broadcast television spectrum in the 600 MHz frequency range to the FCC. Then following the first phase of a stage, in the second phase, or forward auction phase, the FCC will “resell” that spectrum to auction participants. In the event that certain criteria are not met within a particular stage for Auction 1000 to conclude, Auction 1000 then proceeds to a subsequent stage with less available spectrum than the immediately preceding stage and lower spectrum clearing targets.

Before the forward auction phase of Stage 1 of Auction 1000 began, a qualified bidder in the forward auction could make an upfront deposit of up to approximately \$5.4 billion. On July 15, 2016, the FCC announced that a subsidiary of DISH Network and 61 other applicants were qualified to participate in the forward auction. The FCC determined that bidding in Auction 1000 will be “anonymous,” which means that prior to and during the course of the auction, the FCC will not make public any information about a specific applicant’s upfront deposits or its bids. In addition, FCC rules restrict information that applicants may disclose about their participation in Auction 1000.

- *Stage 1:* The reverse auction phase of Stage 1 began on March 29, 2016 and ended on June 29, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 1, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 1 would have had to have exceeded approximately \$88.4 billion. The forward auction phase of Stage 1 included 100 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 1 began on August 16, 2016 and ended on August 30, 2016, but the aggregate bids of approximately \$23.1 billion did not exceed the approximately \$88.4 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 2.
- *Stage 2:* The reverse auction phase of Stage 2 began on September 13, 2016 and ended on October 13, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 2, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 2 would have had to have exceeded approximately \$56.5 billion. The forward auction phase of Stage 2 included 90 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 2 began and ended on October 19, 2016, but the aggregate bids of approximately \$21.5 billion did not exceed the approximately \$56.5 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 3.
- *Stage 3:* The reverse auction phase of Stage 3 began on November 1, 2016 and ended on December 1, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 3, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 3 would have had to have exceeded approximately \$42.3 billion. The forward auction phase of Stage 3 included 80 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 3 began and ended on December 5, 2016, but the aggregate bids of approximately \$19.7 billion did not exceed the approximately \$42.3 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 4.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

- Stage 4: The reverse auction phase of Stage 4 began on December 13, 2016 and ended on January 13, 2017. Pursuant to the FCC's procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 4, in order for Auction 1000 to ultimately conclude, the aggregate bids in the forward auction phase of Stage 4 would have to exceed approximately \$12.0 billion. The forward auction phase of Stage 4 includes 70 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters' indicated availability of spectrum in the reverse auction phase. The clock bidding portion of the forward auction phase of Stage 4 began on January 18, 2017 and ended on February 10, 2017. The aggregate bids of approximately \$19.6 billion exceeded the approximately \$12.0 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to the assignment portion of the forward auction phase in which winning bidders in the clock bidding portion have the opportunity to bid for frequency-specific licenses. The assignment portion is scheduled to begin on March 6, 2017, and all assignment rounds are expected to end no later than March 30, 2017. During the assignment portion, the FCC rules restricting information that forward auction applicants may disclose about their participation in Auction 1000 remain in place. As mentioned above, a subsidiary of DISH Network qualified to participate in the forward auction. To the extent that it is the winning bidder for any 600 MHz licenses, we would expect to pay for such licenses from any upfront deposit made with the FCC and/or existing cash and marketable investment securities balances.

See Note 14 for further information.

DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses

Through our wholly-owned subsidiaries American AWS-3 Wireless II L.L.C. ("American II") and American AWS-3 Wireless III L.L.C. ("American III"), we have made over \$10.0 billion in certain non-controlling investments in Northstar Spectrum, LLC ("Northstar Spectrum"), the parent company of Northstar Wireless, LLC ("Northstar Wireless," and collectively with Northstar Spectrum, the "Northstar Entities"), and in SNR Wireless HoldCo, LLC ("SNR HoldCo"), the parent company of SNR Wireless LicenseCo, LLC ("SNR Wireless," and collectively with SNR HoldCo, the "SNR Entities"), respectively. On October 27, 2015, the FCC granted certain AWS-3 wireless spectrum licenses (the "AWS-3 Licenses") to Northstar Wireless and to SNR Wireless, respectively, which are recorded in "FCC authorizations" on our Consolidated Balance Sheets. Under the applicable accounting guidance in Accounting Standards Codification 810, Consolidation ("ASC 810"), Northstar Spectrum and SNR HoldCo are considered variable interest entities and, based on the characteristics of the structure of these entities and in accordance with the applicable accounting guidance, we have consolidated these entities into our financial statements beginning in the fourth quarter 2014. See Note 2 for further information.

The AWS-3 Licenses are subject to certain interim and final build-out requirements. We may need to make significant additional loans to the Northstar Entities and to the SNR Entities, or they may need to partner with others, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate these AWS-3 Licenses, and comply with regulations applicable to such AWS-3 Licenses. Depending upon the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such loans or partnerships could vary significantly. There can be no assurance that we will be able to obtain a profitable return on our non-controlling investments in the Northstar Entities and the SNR Entities.

See Note 14 for further information.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

2. Summary of Significant Accounting Policies

Principles of Consolidation and Basis of Presentation

We consolidate all majority owned subsidiaries, investments in entities in which we have controlling influence and variable interest entities where we have been determined to be the primary beneficiary. Minority interests are recorded as noncontrolling interests or redeemable noncontrolling interests. See below for further information. Non-consolidated investments are accounted for using the equity method when we have the ability to significantly influence the operating decisions of the investee. When we do not have the ability to significantly influence the operating decisions of an investee, the cost method is used. All significant intercompany accounts and transactions have been eliminated in consolidation. Certain prior period amounts have been reclassified to conform to the current period presentation.

Redeemable Noncontrolling Interests

Sling TV. Sling TV Holding L.L.C. (“Sling TV Holding,” formerly known as DISH Digital Holding L.L.C.) has been consolidated into our financial statements since July 1, 2012. Effective August 1, 2014, EchoStar Corporation (“EchoStar”) and Sling TV Holding entered into an exchange agreement (the “Exchange Agreement”) pursuant to which, among other things, Sling TV Holding distributed certain assets to EchoStar and EchoStar reduced its interest in Sling TV Holding to a ten percent non-voting interest.

EchoStar’s ten percent non-voting interest is redeemable contingent on a certain performance goal being achieved by Sling TV Holding. In addition, subject to certain conditions, the interest is redeemable at fair value within sixty days following the fifth anniversary of the Exchange Agreement. This interest is considered temporary equity and is recorded as “Redeemable noncontrolling interests” in the mezzanine section of our Consolidated Balance Sheets. EchoStar’s redeemable noncontrolling interest in Sling TV Holding was initially accounted for at fair value. The performance goal has been determined to be probable of achievement. Accordingly, the value of EchoStar’s redeemable noncontrolling interest in Sling TV Holding is adjusted each reporting period for any change in redemption value above the initial fair value (adjusted for the operating results of Sling TV Holding attributable to EchoStar subsequent to August 1, 2014), with the offset recorded in “Additional paid-in capital,” net of deferred taxes, on our Consolidated Balance Sheets. The operating results of Sling TV Holding attributable to EchoStar are recorded as “Redeemable noncontrolling interests” in our Consolidated Balance Sheets effective August 1, 2014, with the offset recorded in “Net income (loss) attributable to noncontrolling interests, net of tax” on our Consolidated Statements of Operations and Comprehensive Income (Loss). On January 31, 2017, we entered into a Share Exchange Agreement with EchoStar pursuant to which, among other things, EchoStar will transfer its ten percent non-voting interest in Sling TV Holding to us. See Note 18 for further information on Sling TV Holding, the Exchange Agreement and the Share Exchange Agreement.

Northstar Wireless. Northstar Wireless is a wholly-owned subsidiary of Northstar Spectrum, which is an entity owned by Northstar Manager, LLC (“Northstar Manager”) and us. Under the applicable accounting guidance in ASC 810, Northstar Spectrum is considered a variable interest entity and, based on the characteristics of the structure of this entity and in accordance with the applicable accounting guidance, we have consolidated Northstar Spectrum into our financial statements beginning in the fourth quarter 2014. After the five-year anniversary of the grant of the AWS-3 Licenses to Northstar Wireless (and in certain circumstances, prior to the five-year anniversary of the grant of the AWS-3 Licenses to Northstar Wireless), Northstar Manager has the ability, but not the obligation, to require Northstar Spectrum to purchase Northstar Manager’s ownership interests in Northstar Spectrum (the “Northstar Put Right”) for a purchase price that generally equals its equity contribution to Northstar Spectrum plus a fixed annual rate of return. In the event that the Northstar Put Right is exercised by Northstar Manager, the consummation of the sale will be subject to FCC approval. Northstar Spectrum does not have a call right with respect to Northstar Manager’s ownership interests in Northstar Spectrum. Although Northstar Manager is the sole manager of Northstar Spectrum, Northstar Manager’s ownership interest is considered temporary equity under the applicable accounting guidance and is thus recorded as part of “Redeemable noncontrolling interests” in the mezzanine section of our Consolidated Balance Sheets. Northstar Manager’s ownership interest in Northstar Spectrum was initially accounted for at fair value. Subsequently, Northstar Manager’s ownership interest in Northstar Spectrum is increased by the fixed annual rate of return through “Redeemable noncontrolling interests” in our Consolidated Balance Sheets, with the offset recorded in “Net income (loss) attributable to noncontrolling interest, net of tax” on our Consolidated Statements of Operations and Comprehensive Income (Loss). The operating results of Northstar Spectrum attributable to Northstar Manager are recorded as “Redeemable noncontrolling interests” in our Consolidated Balance Sheets, with the offset recorded in “Net income (loss) attributable to noncontrolling interests, net of tax” on our Consolidated Statements of Operations and Comprehensive Income (Loss). See Note 14 for further information.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

SNR Wireless. SNR Wireless is a wholly-owned subsidiary of SNR HoldCo, which is an entity owned by SNR Wireless Management, LLC (“SNR Management”) and us. Under the applicable accounting guidance in ASC 810, SNR HoldCo is considered a variable interest entity and, based on the characteristics of the structure of this entity and in accordance with the applicable accounting guidance, we have consolidated SNR HoldCo into our financial statements beginning in the fourth quarter 2014. After the five-year anniversary of the grant of the AWS-3 Licenses to SNR Wireless (and in certain circumstances, prior to the five-year anniversary of the grant of the AWS-3 Licenses to SNR Wireless), SNR Management has the ability, but not the obligation, to require SNR HoldCo to purchase SNR Management’s ownership interests in SNR HoldCo (the “SNR Put Right”) for a purchase price that generally equals its equity contribution to SNR HoldCo plus a fixed annual rate of return. In the event that the SNR Put Right is exercised by SNR Management, the consummation of the sale will be subject to FCC approval. SNR HoldCo does not have a call right with respect to SNR Management’s ownership interests in SNR HoldCo. Although SNR Management is the sole manager of SNR HoldCo, SNR Management’s ownership interest is considered temporary equity under the applicable accounting guidance and is thus recorded as part of “Redeemable noncontrolling interests” in the mezzanine section of our Consolidated Balance Sheets. SNR Management’s ownership interest in SNR HoldCo was initially accounted for at fair value. Subsequently, SNR Management’s ownership interest in SNR HoldCo is increased by the fixed annual rate of return through “Redeemable noncontrolling interests” in our Consolidated Balance Sheets, with the offset recorded in “Net income (loss) attributable to noncontrolling interest, net of tax” on our Consolidated Statements of Operations and Comprehensive Income (Loss). The operating results of SNR HoldCo attributable to SNR Management are recorded as “Redeemable noncontrolling interests” in our Consolidated Balance Sheets, with the offset recorded in “Net income (loss) attributable to noncontrolling interests, net of tax” on our Consolidated Statements of Operations and Comprehensive Income (Loss). See Note 14 for further information.

Discontinued Operations

On April 26, 2011, we completed the acquisition of most of the assets of Blockbuster, Inc. As of December 31, 2013, Blockbuster had ceased material operations. On January 14, 2014, we completed the sale of our Blockbuster operations in Mexico. Our Consolidated Statements of Cash Flows for the year ended December 31, 2014 was impacted by outflows of \$30 million related to discontinued operations from “Net cash flows from operating activities” and inflows of \$21 million related to discontinued operations from “Net cash flows from investing activities.” Our 2016 and 2015 consolidated financial statements and our 2014 Consolidated Statements of Operations and Comprehensive Income (Loss) has no impact from discontinued operations.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States (“GAAP”) requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expense for each reporting period. Estimates are used in accounting for, among other things, allowances for doubtful accounts, self-insurance obligations, deferred taxes and related valuation allowances, uncertain tax positions, loss contingencies, fair value of financial instruments, fair value of options granted under our stock-based compensation plans, fair value of assets and liabilities acquired in business combinations, fair value of multi-element arrangements, capital leases, asset impairments, estimates of future cash flows used to evaluate impairments, useful lives of property, equipment and intangible assets, independent third-party retailer incentives, programming expenses and subscriber lives. Economic conditions may increase the inherent uncertainty in the estimates and assumptions indicated above. Actual results may differ from previously estimated amounts, and such differences may be material to our consolidated financial statements. Estimates and assumptions are reviewed periodically, and the effects of revisions are reflected prospectively in the period they occur.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Cash and Cash Equivalents

We consider all liquid investments purchased with a remaining maturity of 90 days or less at the date of acquisition to be cash equivalents. Cash equivalents as of December 31, 2016 and 2015 may consist of money market funds, government bonds, corporate notes and commercial paper. The cost of these investments approximates their fair value.

Marketable Investment Securities

We currently classify all marketable investment securities as available-for-sale, except for investments which we accounted for under the fair value option, discussed below. We adjust the carrying amount of our available-for-sale securities to fair value and report the related temporary unrealized gains and losses as a separate component of "Accumulated other comprehensive income (loss)" within "Total stockholders' equity (deficit)," net of related deferred income tax. Declines in the fair value of a marketable investment security which are determined to be "other-than-temporary" are recognized in the Consolidated Statements of Operations and Comprehensive Income (Loss), thus establishing a new cost basis for such investment. For certain of our marketable investment securities, we elected to recognize the changes in fair value through "Other, net" within "Other Income (Expense)" on our Consolidated Statements of Operations and Comprehensive Income (Loss) (the "Fair Value Option").

We evaluate our marketable investment securities portfolio on a quarterly basis to determine whether declines in the fair value of these securities are other-than-temporary. This quarterly evaluation consists of reviewing, among other things:

- the fair value of our marketable investment securities compared to the carrying amount,
- the historical volatility of the price of each security, and
- any market and company specific factors related to each security.

Declines in the fair value of debt and equity investments below cost basis are generally accounted for as follows:

Length of Time Investment Has Been In a Continuous Loss Position	Treatment of the Decline in Value (absent specific factors to the contrary)
Less than six months	Generally, considered temporary.
Six to nine months	Evaluated on a case by case basis to determine whether any company or market-specific factors exist indicating that such decline is other-than-temporary.
Greater than nine months	Generally, considered other-than-temporary. The decline in value is recorded as a charge to earnings.

Additionally, in situations where the fair value of a debt security is below its carrying amount, we consider the decline to be other-than-temporary and record a charge to earnings if any of the following factors apply:

- we have the intent to sell the security,
- it is more likely than not that we will be required to sell the security before maturity or recovery, or
- we do not expect to recover the security's entire amortized cost basis, even if there is no intent to sell the security.

In general, we use the first in, first out method to determine the cost basis on sales of marketable investment securities.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Trade Accounts Receivable

Management estimates the amount of required allowances for the potential non-collectability of accounts receivable based upon past collection experience and consideration of other relevant factors. However, past experience may not be indicative of future collections and therefore additional charges could be incurred in the future to reflect differences between estimated and actual collections.

Inventory

Inventory is stated at the lower of cost or net realizable value. Cost is determined using the first-in, first-out method. The cost of manufactured inventory includes the cost of materials, labor, freight-in, royalties and manufacturing overhead. Net realizable value is calculated as the estimated selling price less reasonable costs necessary to complete, sell, transport and dispose of the inventory.

Property and Equipment

Property and equipment are stated at amortized cost less impairment losses, if any. The costs of satellites under construction, including interest and certain amounts prepaid under our satellite service agreements, are capitalized during the construction phase, assuming the eventual successful launch and in-orbit operation of the satellite. If a satellite were to fail during launch or while in-orbit, the resultant loss would be charged to expense in the period such loss was incurred. The amount of any such loss would be reduced to the extent of insurance proceeds estimated to be received, if any. Depreciation is recorded on a straight-line basis over useful lives ranging from one to 40 years. Repair and maintenance costs are charged to expense when incurred. Renewals and improvements that add value or extend the asset's useful life are capitalized.

Impairment of Long-Lived Assets

We review our long-lived assets and identifiable finite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. For assets which are held and used in operations, the asset would be impaired if the carrying amount of the asset (or asset group) exceeded its undiscounted future net cash flows. Once an impairment is determined, the actual impairment recognized is the difference between the carrying amount and the fair value as estimated using one of the following approaches: income, cost and/or market. Assets which are to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell. The carrying amount of a long-lived asset or asset group is considered impaired when the anticipated undiscounted cash flows from such asset or asset group is less than its carrying amount. In that event, a loss is recorded in "Impairment of long-lived assets" on our Consolidated Statements of Operations and Comprehensive Income (Loss) based on the amount by which the carrying amount exceeds the fair value of the long-lived asset or asset group. Fair value, using the income approach, is determined primarily using a discounted cash flow model that uses the estimated cash flows associated with the asset or asset group under review, discounted at a rate commensurate with the risk involved. Fair value, utilizing the cost approach, is determined based on the replacement cost of the asset reduced for, among other things, depreciation and obsolescence. Fair value, utilizing the market approach, benchmarks the fair value against the carrying amount. See Note 8 for further information.

DBS Satellites. We currently evaluate our DBS satellite fleet for impairment as one asset group whenever events or changes in circumstances indicate that its carrying amount may not be recoverable. We do not believe any triggering event has occurred which would indicate impairment as of December 31, 2016.

AWS-4 Satellites. We currently evaluate our AWS-4 satellite fleet for impairment whenever events or changes in circumstances indicate that its carrying amount may not be recoverable. We do not believe any triggering event has occurred which would indicate impairment as of December 31, 2016. For the year ended December 31, 2015, we wrote down the net book value of the D1 satellite and related ground equipment to its fair value as of December 31, 2015 and recorded a \$123 million impairment charge in "Impairment of long-lived assets" on our Consolidated Statements of Operations and Comprehensive Income (Loss). See Note 8 for further information.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Indefinite-Lived Intangible Assets and Goodwill

We do not amortize indefinite-lived intangible assets and goodwill but test these assets for impairment annually, during the fourth quarter or more often if indicators of impairment arise. Intangible assets that have finite lives are amortized over their estimated useful lives and tested for impairment as described above for long-lived assets. Our intangible assets with indefinite lives primarily consist of FCC licenses. Generally, we have determined that our FCC licenses have indefinite useful lives due to the following:

- FCC licenses are a non-depleting asset;
- existing FCC licenses are integral to our business segments and will contribute to cash flows indefinitely;
- replacement DBS satellite applications are generally authorized by the FCC subject to certain conditions, without substantial cost under a stable regulatory, legislative and legal environment;
- maintenance expenditures to obtain future cash flows are not significant;
- FCC licenses are not technologically dependent; and
- we intend to use these assets indefinitely.

DBS FCC Licenses. We combine all of our indefinite-lived DBS FCC licenses that we currently utilize or plan to utilize in the future into a single unit of accounting. For 2016 and 2015, management performed a qualitative assessment to determine whether it is more likely than not that the fair value of the DBS FCC licenses exceeds its carrying amount. In our assessment, we considered several qualitative factors, including, among others, overall financial performance, industry and market considerations, and relevant company specific events. In contemplating all factors in their totality, we concluded that it is more likely than not that the fair value of the DBS FCC licenses exceeds its carrying amount. As such, no further analysis was required.

The DBS FCC licenses were assessed quantitatively in 2014. Our quantitative assessments consisted of a discounted cash flow analysis encompassing future cash flows from satellites transmitting from such licensed orbital locations, including revenue attributable to programming offerings from such satellites, the direct operating and subscriber acquisition costs related to such programming, and future capital costs for replacement satellites. Projected revenue and cost amounts included projected subscribers. In conducting our annual impairment test in 2014, we determined that the fair value of the DBS FCC licenses exceeded its carrying amount.

Wireless Spectrum Licenses. We combine our AWS-4 and H Block wireless spectrum licenses and the Northstar Licenses and SNR Licenses into a single unit of accounting. For 2016 and 2015, management performed a qualitative assessment to determine whether it is more likely than not that the fair value of these licenses exceeds the carrying amount of these licenses. In our assessment, we considered several qualitative factors, including, among others, macroeconomic conditions, industry and market conditions, relevant company specific events, and perception of the market. In contemplating all factors in their totality, we concluded that it is more likely than not that the fair value of these licenses exceeds the carrying amount of these licenses. As such, no further analysis was required.

The AWS-4 and H Block wireless spectrum licenses were assessed quantitatively in 2014. Our quantitative assessment consisted of an income approach and a market approach. The income approach consisted of a probability weighted analysis considering estimated future cash flows discounted at a rate commensurate with the risk involved. The market approach benchmarked the fair value of the AWS-4 and H-Block wireless spectrum licenses against the carrying amount of these licenses. In conducting our annual impairment test in 2014, we determined that the fair value of the AWS-4 and H Block wireless spectrum licenses exceeded the carrying amount of these licenses.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Our 700 MHz wireless spectrum licenses are assessed as a single unit of accounting. For 2016 and 2015, management performed a qualitative assessment to determine whether it is more likely than not that the fair value of the 700 MHz wireless spectrum licenses exceeds its carrying amount. In our assessment, we considered several qualitative factors, including, among others, macroeconomic conditions, industry and market conditions, relevant company specific events, and perception of the market. In contemplating all factors in their totality, we concluded that it is more likely than not that the fair value of these licenses exceeds its carrying amount. As such, no further analysis was required.

The 700 MHz wireless spectrum licenses were assessed quantitatively in 2014, in which the estimated fair value for the 700 MHz licenses was determined using the market approach. The market approach benchmarks the fair value of the 700 MHz licenses against its carrying amount. In conducting our annual impairment test in 2014, we determined that the fair value of the 700 MHz wireless spectrum licenses exceeded its carrying amount.

Changes in circumstances or market conditions could result in a write-down of any of the above wireless spectrum licenses in the future.

Capitalized Interest

We capitalize interest associated with the acquisition or construction of certain assets, including, among other things, satellites and wireless spectrum licenses. Capitalization of interest begins when, among other things, steps are taken to prepare the asset for its intended use and ceases when the asset is ready for its intended use or when these activities are substantially suspended.

We are currently preparing for the commercialization of our AWS-4 and H Block wireless spectrum licenses, and interest expense related to their carrying amount is being capitalized. In addition, on October 27, 2015, the FCC granted certain AWS-3 Licenses to Northstar Wireless and to SNR Wireless, respectively, in which we have made certain non-controlling investments. Northstar Wireless and SNR Wireless are preparing for the commercialization of their AWS-3 Licenses and began capitalizing interest related to those AWS-3 Licenses as of October 27, 2015. As the carrying amount of these licenses is significant compared to the carrying value of our long-term debt, a substantial portion of our interest expense is capitalized.

Business Combinations

When we acquire a business, we allocate the purchase price to the various components of the acquisition based upon the fair value of each component using various valuation techniques, including the market approach, income approach and/or cost approach. The accounting standard for business combinations requires most identifiable assets, liabilities, noncontrolling interests and goodwill acquired to be recorded at fair value. Transaction costs related to the acquisition of the business are expensed as incurred. Costs associated with the issuance of debt associated with a business combination are capitalized and included as a yield adjustment to the underlying debt's stated rate. Acquired intangible assets other than goodwill are amortized over their estimated useful lives unless the lives are determined to be indefinite. Amortization of these intangible assets are recorded on a straight line basis over an average finite useful life primarily ranging from approximately two to ten years or in relation to the estimated discounted cash flows over the life of the intangible asset.

Other Investment Securities

Generally, we account for our unconsolidated equity investments under either the equity method or cost method of accounting. Because these equity securities are generally not publicly traded, it is not practical to regularly estimate the fair value of the investments; however, these investments are subject to an evaluation for other-than-temporary impairment on a quarterly basis. This quarterly evaluation consists of reviewing, among other things, company business plans, current financial statements and key financial metrics, if available, for factors that may indicate an impairment of our investment. Such factors may include, but are not limited to, cash flow concerns, material litigation, violations of debt covenants and changes in business strategy. The fair value of these equity investments is not estimated unless there are identified changes in circumstances that may indicate an impairment exists and these changes are likely to have a significant adverse effect on the fair value of the investment.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Long-Term Deferred Revenue and Other Long-Term Liabilities

Certain programmers provide us up-front payments. Such amounts are deferred and recognized as reductions to “Subscriber-related expenses” on a straight-line basis over the relevant remaining contract term (generally up to ten years). The current and long-term portions of these deferred credits are recorded in our Consolidated Balance Sheets in “Deferred revenue and other” and “Long-term deferred revenue and other long-term liabilities,” respectively.

Sales Taxes

We account for sales taxes imposed on our goods and services on a net basis in our Consolidated Statements of Operations and Comprehensive Income (Loss). Since we primarily act as an agent for the governmental authorities, the amount charged to the customer is collected and remitted directly to the appropriate jurisdictional entity.

Income Taxes

We establish a provision for income taxes currently payable or receivable and for income tax amounts deferred to future periods. Deferred tax assets and liabilities are recorded for the estimated future tax effects of differences that exist between the book and tax basis of assets and liabilities. Deferred tax assets are offset by valuation allowances when we believe it is more likely than not that such net deferred tax assets will not be realized.

Accounting for Uncertainty in Income Taxes

From time to time, we engage in transactions where the tax consequences may be subject to uncertainty. We record a liability when, in management’s judgment, a tax filing position does not meet the more likely than not threshold. For tax positions that meet the more likely than not threshold, we may record a liability depending on management’s assessment of how the tax position will ultimately be settled. We adjust our estimates periodically for ongoing examinations by and settlements with various taxing authorities, as well as changes in tax laws, regulations and precedent. We classify interest and penalties, if any, associated with our uncertain tax positions as a component of “Interest expense, net of amounts capitalized” and “Other, net,” respectively, on our Consolidated Statements of Operations and Comprehensive Income (Loss).

Fair Value Measurements

We determine fair value based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. Market or observable inputs are the preferred source of values, followed by unobservable inputs or assumptions based on hypothetical transactions in the absence of market inputs. We apply the following hierarchy in determining fair value:

- Level 1, defined as observable inputs being quoted prices in active markets for identical assets;
- Level 2, defined as observable inputs other than quoted prices included in Level 1, including quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar instruments in markets that are not active; and derivative financial instruments indexed to marketable investment securities; and
- Level 3, defined as unobservable inputs for which little or no market data exists, consistent with reasonably available assumptions made by other participants therefore requiring assumptions based on the best information available.

As of December 31, 2016 and 2015, the carrying amount for cash and cash equivalents, trade accounts receivable (net of allowance for doubtful accounts) and current liabilities (excluding the “Current portion of long-term debt and capital lease obligations”) is equal to or approximates fair value due to their short-term nature or proximity to current market rates. See Note 6 for the fair value of our marketable investment securities and derivative financial instruments.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Fair values for our publicly traded debt securities are based on quoted market prices, when available. The fair values of private debt are based on, among other things, available trade information, and/or an analysis in which we evaluate market conditions, related securities, various public and private offerings, and other publicly available information. In performing this analysis, we make various assumptions regarding, among other things, credit spreads, and the impact of these factors on the value of the debt securities. See Note 9 for the fair value of our long-term debt.

Deferred Debt Issuance Costs and Debt Discounts

In accordance with accounting guidance on embedded conversion features, we value and bifurcate the conversion option associated with convertible notes from the host debt instrument. The resulting debt discount is deferred and amortized to interest expense using the effective interest rate method over the terms of the respective notes.

Costs of issuing debt are generally deferred and amortized to interest expense using the effective interest rate method over the terms of the respective notes.

See Note 9 for further information.

Revenue Recognition

We recognize revenue when an arrangement exists, prices are determinable, collectability is reasonably assured and the goods or services have been delivered.

Revenue from our Pay-TV services are recognized when programming is broadcast to subscribers. We recognize revenue from our broadband services when the service is provided. Payments received from Pay-TV and Broadband subscribers in advance of the broadcast or service period are recorded as “Deferred revenue and other” in our Consolidated Balance Sheets until earned.

For certain of our promotions, subscribers are charged an upfront fee. A portion of these fees may be deferred and recognized over the estimated subscriber life for new subscribers or the estimated remaining life for existing subscribers ranging from four to five years. Revenue from advertising sales is recognized when the related services are performed.

Subscriber fees for DISH branded pay-TV equipment rental fees and other hardware related fees, including fees for DVRs, fees for broadband equipment and additional outlet fees, advertising services and fees earned from our in-home service operations are recognized as revenue as earned. Generally, revenue from equipment sales and equipment upgrades is recognized upon shipment to customers. Revenue from sales of streaming-capable devices for our Sling branded pay-TV services are recognized over the promotion period.

Certain of our existing and new subscriber promotions include programming discounts. Programming revenues are recorded as earned at the discounted monthly rate charged to the subscriber.

We offer our customers the opportunity to download movies for a specific viewing period or permanently purchase a movie from our website. We recognize revenue when the movie is successfully downloaded by the customer, which, based on our current technology, occurs at the time the customer plays the movie for the first time.

Subscriber-Related Expenses

The cost of television programming distribution rights is generally incurred on a per subscriber basis and various upfront carriage payments are recognized when the related programming is distributed to subscribers. Long-term flat rate programming contracts are charged to expense using the straight-line method over the term of the agreement. The cost of television programming rights to distribute live sporting events for a season or tournament is charged to expense using the straight-line method over the course of the season or tournament.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

“Subscriber-related expenses” in the Consolidated Statements of Operations and Comprehensive Income (Loss) principally include programming expenses, costs for Pay-TV and broadband services incurred in connection with our in-home service and call center operations, billing costs, refurbishment and repair costs related to DBS receiver systems and broadband equipment, subscriber retention, other variable subscriber expenses and monthly wholesale fees paid to broadband providers. These costs are recognized as the services are performed or as incurred. The cost of broadband services is expensed monthly and generally incurred on a per subscriber basis.

Subscriber Acquisition Costs

Subscriber acquisition costs in our Consolidated Statements of Operations and Comprehensive Income (Loss) consist of costs incurred to acquire new Pay-TV and Broadband subscribers through independent third parties and our direct sales distribution channel. Subscriber acquisition costs include the following line items from our Consolidated Statements of Operations and Comprehensive Income (Loss):

- “*Cost of sales — subscriber promotion subsidies*” includes the cost of our DBS receiver systems sold to independent third-party retailers and other distributors of our equipment and DBS receiver systems sold directly by us to DISH branded pay-TV subscribers.
- “*Other subscriber acquisition costs*” includes net costs related to promotional incentives and costs related to installation and other promotional subsidies for our DISH branded pay-TV service as well as our direct sales efforts and commissions for our Sling branded pay-TV services.
- “*Subscriber acquisition advertising*” includes advertising and marketing expenses related to the acquisition of new Pay-TV and Broadband subscribers. Advertising costs are expensed as incurred.

We characterize amounts paid to our independent third-party retailers as consideration for equipment installation services and for equipment buydowns (incentives and rebates) as a reduction of revenue. We expense payments for equipment installation services as “Other subscriber acquisition costs.” Our payments for equipment buydowns represent a partial or complete return of the independent third-party retailer’s purchase price and are, therefore, netted against the proceeds received from the independent third-party retailer. We report the net cost from our various sales promotions through our independent third-party retailer network as a component of “Other subscriber acquisition costs.”

Derivative Financial Instruments

We may purchase and hold derivative financial instruments for, among other reasons, strategic or speculative purposes. We record all derivative financial instruments on our Consolidated Balance Sheets at fair value as either assets or liabilities. Changes in the fair values of derivative financial instruments are recognized in our results of operations and included in “Other, net” within “Other Income (Expense)” on our Consolidated Statements of Operations and Comprehensive Income (Loss). We have not designated any derivative financial instrument for hedge accounting.

As of December 31, 2016, we did not hold any derivative financial instruments. As of December 31, 2015, we held derivative financial instruments indexed to the trading price of common equity securities with a fair value of \$557 million. The fair value of these derivative financial instruments was dependent on the trading price of the indexed common equity securities. See Note 6 for further information.

Equipment Lease Programs

DISH branded pay-TV subscribers have the choice of leasing or purchasing the satellite receiver and other equipment necessary to receive our DISH branded pay-TV service. Most of our new DISH branded pay-TV subscribers choose to lease equipment and thus we retain title to such equipment. New Broadband subscribers lease the modem and other equipment necessary to receive broadband services. Equipment leased to new and existing DISH branded pay-TV and Broadband subscribers is capitalized and depreciated over their estimated useful lives.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

New Accounting Pronouncements

Revenue from Contracts with Customers. On May 28, 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update 2014-09 *Revenue from Contracts with Customers* (“ASU 2014-09”), and has modified the standard thereafter. On July 9, 2015, the FASB approved a one year deferral on the effective date for implementation of this standard, which changed the effective date for us to January 1, 2018. This converged standard on revenue recognition was issued jointly with the International Accounting Standards Board to create common revenue recognition guidance for GAAP and International Financial Reporting Standards. ASU 2014-09 provides a framework for revenue recognition that replaces most existing GAAP revenue recognition guidance when it becomes effective. ASU 2014-09 allows for either a full retrospective or modified retrospective adoption. We are evaluating the effect that ASU 2014-09 will have on our consolidated financial statements and related disclosures. We have not yet selected an adoption method. While we have not determined the effect of the standard on our ongoing financial reporting, we believe that the standard will, among other things, change the allocation and timing of when revenue is recognized for those customers who have a contractual commitment to receive service for a minimum term, including time-limited discounts or free service periods. Under current accounting rules, we recognize revenue net of discounts during the promotional periods and do not recognize any revenue during free service periods. Under ASU 2014-09, revenue recognition will be accelerated for these contracts as the impact of discounts or free service periods that are considered performance obligations will be recognized uniformly over the total contractual period. In addition, the standard will require that incremental costs to obtain a customer, which represent a significant portion of our non-advertising subscriber acquisition costs, be deferred and recognized over the expected customer life, whereas our current policy is to expense these costs as incurred. As the new standard will impact revenue and cost recognition for a significant number of our contracts, as well as our business processes and information technology systems, our evaluation of the effect of the new standard is ongoing. We are currently in the process of identifying and implementing changes to our systems, processes, and internal controls to meet the requirements of the standard. The ultimate impact of adopting ASU 2014-09 for both revenue recognition and costs to obtain and fulfill contracts will depend on the promotions and offers in place during the period leading up to and after the adoption of ASU 2014-09.

Recognition and Measurement of Financial Assets and Financial Liabilities. On January 5, 2016, the FASB issued ASU 2016-01 *Recognition and Measurement of Financial Assets and Financial Liabilities* (“ASU 2016-01”), which amends certain aspects of recognition, measurement, presentation and disclosure of financial instruments. This amendment requires all equity investments to be measured at fair value with changes in the fair value recognized through net income (other than those accounted for under equity method of accounting or those that result in consolidation of the investee). This standard will be effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. We are evaluating the impact the adoption of ASU 2016-01 will have on our consolidated financial statements.

Leases. On February 25, 2016, the FASB issued ASU 2016-02 *Leases* (“ASU 2016-02”), which relates to the accounting of leasing transactions. This standard requires a lessee to record on the balance sheet the assets and liabilities for the rights and obligations created by leases with lease terms of more than 12 months. In addition, this standard requires both lessees and lessors to disclose certain key information about lease transactions. This standard will be effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We are evaluating the impact the adoption of ASU 2016-02 will have on our consolidated financial statements.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Financial Instruments – Credit Losses. On June 16, 2016, the FASB issued ASU 2016-13 *Financial Instruments – Credit Losses, Measurement of Credit Losses on Financial Instruments* (“ASU 2016-13”), which changes the way entities measure credit losses for most financial assets and certain other instruments that are not measured at fair value through net earnings. This standard will be effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted. We are evaluating the impact the adoption of ASU 2016-13 will have on our consolidated financial statements and related disclosures.

Statement of Cash Flows - Update. On August 26, 2016, the FASB issued 2016-15 *Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments* (“ASU 2016-15”). This update consists of eight provisions that provide guidance on the classification of certain cash receipts and cash payments. If practicable, this update should be applied using a retrospective transition method to each period presented. For the provisions that are impracticable to apply retrospectively, those provisions may be applied prospectively as of the earliest date practicable. This update will become effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted. We are evaluating the impact the adoption of ASU 2016-15 will have on our consolidated financial statements.

Statement of Cash Flows: Restricted Cash. On November 17, 2016, the FASB issued ASU 2016-18 *Restricted Cash* (“ASU 2016-18”), which addresses the diversity where changes in restricted cash are classified on the cash flow statement. ASU 2016-18 requires that changes in restricted cash and cash equivalents be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts on the statement of cash flows. This standard will be effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted. We expect that the adoption of ASU 2016-18 will have an immaterial impact on our consolidated financial statements and related disclosures.

Compensation – Stock Compensation. On March 30, 2016, the FASB issued ASU 2016-09 *Compensation – Stock Compensation: Improvements to Employee Share-Based Payment Accounting* (“ASU 2016-09”), which relates to the accounting for employee share-based payments. This standard addresses several aspects of the accounting for share-based payment award transactions, including: (a) income tax consequences; (b) classification of awards as either equity or liabilities; and (c) classification on the statement of cash flows. This standard will be effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. During the third quarter 2016, we adopted ASU 2016-09, which had an immaterial impact on our consolidated financial statements.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

3. Basic and Diluted Net Income (Loss) Per Share

We present both basic earnings per share (“EPS”) and diluted EPS. Basic EPS excludes potential dilution and is computed by dividing “Net income (loss) attributable to DISH Network” by the weighted-average number of common shares outstanding for the period. Diluted EPS reflects the potential dilution that could occur if stock awards were exercised and if our 3 3/8% Convertible Notes due 2026 (the “Convertible Notes due 2026”) issued August 8, 2016 were converted. The potential dilution from stock awards is accounted for using the treasury stock method based on the average market value of our Class A common stock. The potential dilution from conversion of the Convertible Notes due 2026 is accounted for using the if-converted method, which requires that all of the shares of our Class A common stock issuable upon conversion of the Convertible Notes due 2026 will be included in the calculation of diluted EPS assuming conversion of the Convertible Notes due 2026 at the beginning of the reporting period (or at time of issuance, if later). The following table presents EPS amounts for all periods and the basic and diluted weighted-average shares outstanding used in the calculation.

	For the Years Ended December 31,		
	2016	2015	2014
	(In thousands, except per share amounts)		
Net income (loss)	\$ 1,469,454	\$ 769,276	\$ 928,902
Less: Net income (loss) attributable to noncontrolling interests, net of tax	19,601	22,184	(15,791)
Net income (loss) attributable to DISH Network - Basic	1,449,853	747,092	944,693
Interest on dilutive 3 3/8% Convertible Notes due 2026, net of tax	27,515	—	—
Net income (loss) attributable to DISH Network - Diluted	\$ 1,477,368	\$ 747,092	\$ 944,693
Weighted-average common shares outstanding - Class A and B common stock:			
Basic	464,807	462,995	460,126
Dilutive impact of 3 3/8% Convertible Notes due 2026	18,361	—	—
Dilutive impact of stock awards outstanding	994	1,702	2,801
Diluted	484,162	464,697	462,927
Earnings per share - Class A and B common stock:			
Basic net income (loss) per share attributable to DISH Network	\$ 3.12	\$ 1.61	\$ 2.05
Diluted net income (loss) per share attributable to DISH Network	\$ 3.05	\$ 1.61	\$ 2.04

Certain stock awards to acquire our Class A common stock are not included in the weighted-average common shares outstanding above, as their effect is anti-dilutive. In addition, vesting of performance based options and rights to acquire shares of our Class A common stock granted pursuant to our performance based stock incentive plans (“Restricted Performance Units”) are both contingent upon meeting certain goals, some of which are not yet probable of being achieved. Furthermore, the warrants that we issued to certain option counterparties in connection with the Convertible Notes due 2026 are only exercisable at their expiration if the market price per share of our Class A common stock is greater than the strike price of the warrants, which is approximately \$86.08 per share, subject to adjustments. As a consequence, the following are not included in the diluted EPS calculation.

	As of December 31,		
	2016	2015	2014
	(In thousands)		
Anti-dilutive stock awards	1,870	712	447
Performance based options (1)	4,312	3,905	7,247
Restricted Performance Units (1)	1,336	1,382	1,798
Common stock warrants	46,029	-	-
Total	53,547	5,999	9,492

- (1) The decrease in performance based options and Restricted Performance Units as of December 31, 2015 primarily resulted from the expiration of the 2005 LTIP in March 2015. See Note 13 for further information.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

4. Supplemental Data - Statements of Cash Flows

The following table presents our supplemental cash flow and other non-cash data.

	For the Years Ended December 31,		
	2016	2015	2014
	(In thousands)		
Cash paid for interest (including capitalized interest)	\$ 775,300	\$ 854,147	\$ 833,483
Cash received for interest	15,020	21,380	138,529
Cash paid for income taxes	439,570	16,014	160,732
Capitalized interest (1)	844,330	369,897	223,658
Initial equity component of the 3 3/8% Convertible Notes due 2026, net of deferred taxes of \$286,322 (2)	487,521	—	—
Employee benefits paid in Class A common stock	25,146	26,026	25,781
Satellites and other assets financed under capital lease obligations	1,328	—	3,462
Satellite and Tracking Stock Transaction with EchoStar:			
Transfer of property and equipment, net	—	—	432,080
Investment in EchoStar and HSSC preferred tracking stock - cost method	—	—	316,204
Transfer of liabilities and other	—	—	44,540
Capital distribution to EchoStar, net of deferred taxes of \$31,274	—	—	51,466
Sling TV Exchange Transaction with EchoStar:			
Transfer of property and equipment, net	—	—	8,978
Transfer of investments and intangibles, net	—	—	25,097
Capital distribution to EchoStar, net of deferred taxes of \$3,542	—	—	5,845
Deemed distribution to EchoStar - initial fair value of redeemable noncontrolling interest, net of deferred taxes of \$8,489	—	—	14,011
Vendor financing	20,000	—	—

(1) See Note 2 for further information.

(2) See Note 9 for further information.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

5. Other Comprehensive Income (Loss)

The following table presents the tax effect on each component of “Other comprehensive income (loss).”

	For the Years Ended December 31,								
	2016			2015			2014		
	Before Tax Amount	Tax (Expense) Benefit	Net of Tax Amount	Before Tax Amount	Tax (Expense) Benefit (1)	Net of Tax Amount	Before Tax Amount	Tax (Expense) Benefit	Net of Tax Amount
	(In thousands)								
Foreign currency translation adjustments	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 3,878	—	\$ 3,878
Unrealized holding gains (losses) on available-for-sale securities	3,050	(1,111)	1,939	20,205	(7,476)	12,729	(11,729)	3,600	(8,129)
Recognition of previously unrealized (gains) losses on available-for-sale securities included in net income (loss)	(99,312)	36,173	(63,139)	(99,361)	(25,894)	(125,255)	7,050	(2,164)	4,886
Other comprehensive income (loss)	\$ (96,262)	\$ 35,062	\$ (61,200)	\$ (79,156)	\$ (33,370)	\$ (112,526)	\$ (801)	\$ 1,436	\$ 635

- (1) Prior to December 31, 2012, we had established a valuation allowance against all deferred tax assets that were capital in nature. At December 31, 2012, it was determined that these deferred tax assets were realizable and the valuation allowance was released, including the valuation allowance related to a specific portfolio of available-for-sale securities for which changes in fair value had historically been recognized as a separate component of “Accumulated other comprehensive income (loss).” Under the intra-period tax allocation rules, a credit of \$63 million was recorded in “Accumulated other comprehensive income (loss)” on our Consolidated Balance Sheets related to the release of this valuation allowance.

We elected to use the aggregate portfolio method to determine when the \$63 million would be released from “Accumulated other comprehensive income (loss)” to “Income tax (provision) benefit, net” on our Consolidated Statements of Operations and Comprehensive Income (Loss). Under the aggregate portfolio approach, the intra-period tax allocation remaining in “Accumulated other comprehensive income (loss)” is not released to “Income tax (provision) benefit, net” until such time that the specific portfolio of available-for-sale securities that generated the original intra-period allocation is liquidated. During the first quarter 2015, this specific available-for-sale security portfolio was liquidated and the \$63 million credit that was previously recorded in “Accumulated other comprehensive income (loss)” was released to “Income tax (provision) benefit, net.” This adjustment has no net effect on “Net cash flows from operating activities” or “Total stockholders’ equity (deficit).”

The “Accumulated other comprehensive income (loss)” is detailed in the following table, net of tax:

Accumulated Other Comprehensive Income (Loss)	Unrealized/ Recognized Gains (Losses)
	(In thousands)
Balance as of December 31, 2014	\$ 174,507
Other comprehensive income (loss) before reclassification	12,729
Amounts reclassified from accumulated other comprehensive income (loss)	(125,255)
Balance as of December 31, 2015	\$ 61,981
Other comprehensive income (loss) before reclassification	1,939
Amounts reclassified from accumulated other comprehensive income (loss)	(63,139)
Balance as of December 31, 2016	\$ 781

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

6. Marketable Investment Securities, Restricted Cash and Cash Equivalents, and Other Investment Securities

Our marketable investment securities, restricted cash and cash equivalents, and other investment securities consisted of the following:

	As of	
	December 31, 2016	December 31, 2015
	(In thousands)	
Marketable investment securities:		
Current marketable investment securities - strategic	\$ 6,721	\$ 259,145
Current marketable investment securities - other	28,895	298,766
Total current marketable investment securities	35,616	557,911
Restricted marketable investment securities (1)	81,679	82,280
Total marketable investment securities	117,295	640,191
Restricted cash and cash equivalents (1)	681	94
Other investment securities:		
Investment in EchoStar preferred tracking stock - cost method	228,795	228,795
Investment in HSSC preferred tracking stock - cost method	87,409	87,409
Other investment securities - cost method	8,167	11,046
Total other investment securities	324,371	327,250
Total marketable investment securities, restricted cash and cash equivalents, and other investment securities	\$ 442,347	\$ 967,535

(1) Restricted marketable investment securities and restricted cash and cash equivalents are included in “Restricted cash, cash equivalents and marketable investment securities” on our Consolidated Balance Sheets.

Marketable Investment Securities

Our marketable investment securities portfolio consists of various debt and equity instruments, all of which are classified as available-for-sale, except as specified below. See Note 2 for further information.

Current Marketable Investment Securities - Strategic

Our current strategic marketable investment securities portfolio includes and may include strategic and financial debt and equity investments in private and public companies that are highly speculative and have experienced and continue to experience volatility. As of December 31, 2016, this portfolio consisted of securities of a small number of issuers, and as a result the value of that portfolio depends, among other things, on the performance of those issuers. The fair value of certain of the debt and equity securities in this portfolio can be adversely impacted by, among other things, the issuers’ respective performance and ability to obtain any necessary additional financing on acceptable terms, or at all.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Current Marketable Investment Securities - Other

Our current marketable investment securities portfolio includes investments in various debt instruments including, among others, commercial paper, corporate securities and U.S. treasury and/or agency securities.

Commercial paper consists mainly of unsecured short-term, promissory notes issued primarily by corporations with maturities ranging up to 365 days. Corporate securities consist of debt instruments issued by corporations with various maturities normally less than 18 months. U. S. Treasury and agency securities consist of debt instruments issued by the federal government and other government agencies.

Restricted Cash, Cash Equivalents and Marketable Investment Securities

As of December 31, 2016 and 2015, our restricted marketable investment securities, together with our restricted cash and cash equivalents, included amounts required as collateral for our letters of credit.

Other Investment Securities

We have strategic investments in certain debt and equity securities that are included in noncurrent “Other investment securities” on our Consolidated Balance Sheets and accounted for using the cost, equity and/or available-for-sale methods of accounting.

Our ability to realize value from our strategic investments in securities that are not publicly traded depends on the success of the issuers’ businesses and their ability to obtain sufficient capital, on acceptable terms or at all, and to execute their business plans. Because private markets are not as liquid as public markets, there is also increased risk that we will not be able to sell these investments, or that when we desire to sell them we will not be able to obtain fair value for them.

Investment in Tracking Stock

On February 20, 2014, we entered into agreements with EchoStar to implement a transaction pursuant to which, among other things: (i) on March 1, 2014, we transferred to EchoStar and Hughes Satellite Systems Corporation (“HSSC”), a subsidiary of EchoStar, five satellites (EchoStar I, EchoStar VII, EchoStar X, EchoStar XI and EchoStar XIV (collectively the “Transferred Satellites”), including related in-orbit incentive obligations and cash interest payments of approximately \$59 million), and approximately \$11 million in cash in exchange for an aggregate of 6,290,499 shares of a series of preferred tracking stock issued by EchoStar (the “EchoStar Tracking Stock”) and an aggregate of 81.128 shares of a series of preferred tracking stock issued by HSSC (the “HSSC Tracking Stock” and together with the EchoStar Tracking Stock, collectively, the “Tracking Stock”); and (ii) beginning on March 1, 2014, we lease back certain satellite capacity on the Transferred Satellites (collectively, the “Satellite and Tracking Stock Transaction”). As of November 30, 2015, we no longer lease satellite capacity on the EchoStar I satellite. The Tracking Stock generally tracks the residential retail satellite broadband business of Hughes Network Systems, LLC (“HNS”), a wholly-owned subsidiary of HSSC, including without limitation the operations, assets and liabilities attributed to the Hughes residential retail satellite broadband business (collectively, the “Hughes Retail Group”). The shares of the Tracking Stock issued to us represent an aggregate 80% economic interest in the Hughes Retail Group.

Since the Satellite and Tracking Stock Transaction is among entities under common control, we recorded the Tracking Stock at EchoStar’s and HSSC’s historical cost basis for these instruments of \$229 million and \$87 million, respectively. The difference between the historical cost basis of the Tracking Stock received and the net carrying value of the Transferred Satellites of \$356 million (including debt obligations, net of deferred taxes), plus the \$11 million in cash, resulted in a \$51 million capital transaction recorded in “Additional paid-in capital” on our Consolidated Balance Sheets. Although our investment in the Tracking Stock represents an aggregate 80% economic interest in the Hughes Retail Group, we have no operational control or significant influence over the Hughes Retail Group business, and currently there is no public market for the Tracking Stock. As such, the Tracking Stock is accounted for under the cost method of accounting.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

On February 20, 2014, DISH Operating L.L.C. (“DOLLC”) and DISH Network L.L.C. (“DNLLC”), each indirect wholly-owned subsidiaries of us, entered into an Investor Rights Agreement with EchoStar and HSSC with respect to the Tracking Stock (the “Investor Rights Agreement”). The Investor Rights Agreement provides, among other things, certain information and consultation rights for us; certain transfer restrictions on the Tracking Stock and certain rights and obligations to offer and sell under certain circumstances (including a prohibition on transfers of the Tracking Stock for one year, with continuing transfer restrictions (including a right of first offer in favor of EchoStar) thereafter, an obligation to sell the Tracking Stock to EchoStar in connection with a change of control of us and a right to require EchoStar to repurchase the Tracking Stock in connection with a change of control of EchoStar, in each case subject to certain terms and conditions); certain registration rights; certain obligations to provide conversion and exchange rights of the Tracking Stock under certain circumstances; and certain protective covenants afforded to holders of the Tracking Stock. The Investor Rights Agreement generally will terminate with respect to our interest should we no longer hold any shares of the HSSC-issued Tracking Stock and any registrable securities under the Investor Rights Agreement. On January 31, 2017, we entered into the Share Exchange Agreement with EchoStar pursuant to which, among other things, we will transfer the EchoStar Tracking Stock to EchoStar and the HSSC Tracking Stock to HSSC. See Note 18 for further information.

Unrealized Gains (Losses) on Marketable Investment Securities

As of December 31, 2016 and 2015, we had accumulated net unrealized gains of \$1 million and \$98 million, respectively. These amounts, net of related tax effect, were \$1 million and \$62 million, respectively. All of these amounts are included in “Accumulated other comprehensive income (loss)” within “Total stockholders’ equity (deficit).” The components of our available-for-sale investments are summarized in the table below.

	As of December 31, 2016				As of December 31, 2015			
	Marketable Investment Securities	Gains	Unrealized Losses	Net	Marketable Investment Securities	Gains	Unrealized Losses	Net
	(In thousands)							
Debt securities (including restricted):								
U.S. Treasury and agency securities	\$ 81,982	\$ 13	\$ (132)	\$ (119)	\$ 82,124	\$ 2	\$ (135)	\$ (133)
Corporate securities	33,555	1,327	—	1,327	349,897	29,370	(480)	28,890
Other	1,758	64	(11)	53	47,847	73	(17)	56
Equity securities	—	—	—	—	160,323	68,751	(41)	68,710
Total	<u>\$ 117,295</u>	<u>\$ 1,404</u>	<u>\$ (143)</u>	<u>\$ 1,261</u>	<u>\$ 640,191</u>	<u>\$ 98,196</u>	<u>\$ (673)</u>	<u>\$ 97,523</u>

As of December 31, 2016, restricted and non-restricted marketable investment securities included debt securities of \$76 million with contractual maturities within one year and \$41 million with contractual maturities extending longer than one year through and including five years. Actual maturities may differ from contractual maturities as a result of our ability to sell these securities prior to maturity.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Marketable Investment Securities in a Loss Position

The following table reflects the length of time that the individual securities, accounted for as available-for-sale, have been in an unrealized loss position, aggregated by investment category. As of December 31, 2016, the unrealized losses related to our investments in debt securities primarily represented investments in U.S. treasury and agency securities. We have the ability to hold and do not intend to sell our investments in these debt securities before they recover or mature, and it is more likely than not that we will hold these investments until that time. In addition, we are not aware of any specific factors indicating that the underlying issuers of these debt securities would not be able to pay interest as it becomes due or repay the principal at maturity. Therefore, we believe that these changes in the estimated fair values of these marketable investment securities are related to temporary market fluctuations.

	As of			
	December 31, 2016		December 31, 2015	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
(In thousands)				
Debt Securities:				
Less than 12 months	\$ 52,011	\$ (132)	\$ 303,194	\$ (612)
12 months or more	1,537	(11)	7,512	(20)
Equity Securities:				
Less than 12 months	—	—	6,133	(41)
12 months or more	—	—	—	—
Total	\$ 53,548	\$ (143)	\$ 316,839	\$ (673)

Fair Value Measurements

Our investments measured at fair value on a recurring basis were as follows:

	As of							
	December 31, 2016				December 31, 2015			
	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
(In thousands)								
Cash equivalents (including restricted)	\$ 5,187,900	\$ 147,494	\$ 5,040,406	\$ —	\$ 920,689	\$ 82,675	\$ 838,014	\$ —
Debt securities (including restricted):								
U.S. Treasury and agency securities	\$ 81,982	\$ 81,982	\$ —	\$ —	\$ 82,124	\$ 77,328	\$ 4,796	\$ —
Corporate securities	33,555	—	27,025	6,530	349,897	—	343,733	6,164
Other	1,758	—	1,567	191	47,847	—	47,648	199
Equity securities	—	—	—	—	160,323	160,323	—	—
Subtotal	117,295	81,982	28,592	6,721	640,191	237,651	396,177	6,363
Derivative financial instruments	—	—	—	—	556,828	—	556,828	—
Total	\$ 117,295	\$ 81,982	\$ 28,592	\$ 6,721	\$ 1,197,019	\$ 237,651	\$ 953,005	\$ 6,363

As of December 31, 2016 and 2015, our Level 3 investments consisted predominately of corporate securities. On a quarterly basis we evaluate the reasonableness of significant unobservable inputs used in those measurements. For our Level 3 investments, we evaluate, among other things, the terms of the underlying instruments, the credit ratings of the issuers, current market conditions, and other relevant factors. Based on these factors, we assess the risk of realizing expected cash flows and we apply an observable discount rate that reflects this risk. We may also reduce our valuations to reflect a liquidity discount based on the lack of an active market for these securities.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Changes in Level 3 instruments were as follows:

	Level 3 Investment Securities
	(In thousands)
Balance as of December 31, 2014	\$ 142,140
Net realized and unrealized gains (losses) included in earnings	1,089
Net realized and unrealized gains (losses) included in other comprehensive income (loss)	(2,289)
Purchases	—
Settlements	(134,577)
Issuances	—
Transfers into or out of Level 3	—
Balance as of December 31, 2015	\$ 6,363
Net realized and unrealized gains (losses) included in earnings	—
Net realized and unrealized gains (losses) included in other comprehensive income (loss)	547
Purchases	—
Settlements	(189)
Issuances	—
Transfers into or out of Level 3	—
Balance as of December 31, 2016	\$ 6,721

During the years ended December 31, 2016 and 2015, we had no transfers in or out of Level 1 and Level 2 fair value measurements.

Gains and Losses on Sales and Changes in Carrying Amounts of Investments

“Other, net” within “Other Income (Expense)” included on our Consolidated Statements of Operations and Comprehensive Income (Loss) is as follows:

	For the Years Ended December 31,		
Other Income (Expense):	2016	2015	2014
	(In thousands)		
Marketable investment securities - gains (losses) on sales/exchanges	\$ 116,550	\$ 119,448	\$ 7,649
Marketable investment securities - unrealized gains (losses) on investments accounted for using the Fair Value Option	—	—	4,727
Derivative financial instruments - net realized and/or unrealized gains (losses)	5,405	173,369	(59,015)
Marketable investment securities - other-than-temporary impairments	(2,863)	(5,567)	(13,876)
Other	(1,910)	(9,207)	(8,826)
Total	\$ 117,182	\$ 278,043	\$ (69,341)

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

7. Inventory

Inventory consisted of the following:

	As of	
	December 31, 2016	December 31, 2015
	(In thousands)	
Finished goods	\$ 323,453	\$ 304,827
Work-in-process and service repairs	132,313	74,828
Raw materials	9,069	10,673
Total inventory	\$ 464,835	\$ 390,328

8. Property and Equipment and Intangible Assets

Property and Equipment

Property and equipment consisted of the following:

	Depreciable Life (In Years)			As of	
				December 31, 2016	December 31, 2015
				(In thousands)	
Equipment leased to customers	2	-	5	\$ 3,104,669	\$ 3,549,701
EchoStar XV			15	277,658	277,658
EchoStar XVIII			15	411,255	—
D1		N/A		55,000	55,000
T1			15	401,721	401,721
Satellites acquired under capital lease agreements	10	-	15	499,819	499,819
Furniture, fixtures, equipment and other	1	-	10	805,526	775,834
Buildings and improvements	1	-	40	93,605	86,928
Land			—	5,205	5,504
Construction in progress			—	68,187	382,464
Total property and equipment				5,722,645	6,034,629
Accumulated depreciation				(3,165,263)	(3,110,449)
Property and equipment, net				\$ 2,557,382	\$ 2,924,180

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Construction in progress consisted of the following:

	As of	
	December 31, 2016	December 31, 2015
	(In thousands)	
EchoStar XVIII, including capitalized interest	\$ —	\$ 346,417
Other	68,187	36,047
Total construction in progress	\$ 68,187	\$ 382,464

Our EchoStar XVIII satellite was launched on June 18, 2016 and became operational as an in-orbit spare at the 61.5 degree orbital location during the third quarter 2016, at which time it was reclassified from Construction in progress to Satellites within “Property and equipment, net” on our Consolidated Balance Sheets.

Depreciation and amortization expense consisted of the following:

	For the Years Ended December 31,		
	2016	2015	2014
	(In thousands)		
Equipment leased to customers	\$ 768,283	\$ 824,799	\$ 854,759
Satellites	96,965	87,827	95,766
Buildings, furniture, fixtures, equipment and other	87,898	87,422	127,411
Total depreciation and amortization	\$ 953,146	\$ 1,000,048	\$ 1,077,936

Cost of sales and operating expense categories included in our accompanying Consolidated Statements of Operations and Comprehensive Income (Loss) do not include depreciation expense related to satellites or equipment leased to customers.

Satellites

Pay-TV Satellites. We currently utilize 13 satellites in geostationary orbit approximately 22,300 miles above the equator, two of which we own and depreciate over their estimated useful life. We currently utilize certain capacity on nine satellites that we lease from EchoStar, which are accounted for as operating leases. We also lease two satellites from third parties, which are accounted for as capital leases and are depreciated over the shorter of the economic life or the term of the satellite agreement.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

As of December 31, 2016, our pay-TV satellite fleet consisted of the following:

Satellites	Launch Date	Degree Orbital Location	Estimated Useful Life (Years)/Lease Termination Date
Owned:			
EchoStar XV	July 2010	61.5	15
EchoStar XVIII	June 2016	61.5	15
Leased from EchoStar (1):			
EchoStar VII (2)	February 2002	119	June 2018
EchoStar IX	August 2003	121	Month to month
EchoStar X (2)	February 2006	110	February 2021
EchoStar XI (2)	July 2008	110	September 2021
EchoStar XII (2)	July 2003	61.5	September 2017
EchoStar XIV (2)	March 2010	119	February 2023
EchoStar XVI (3)	November 2012	61.5	January 2018
Nimiq 5	September 2009	72.7	September 2019
QuetzSat-1	September 2011	77	November 2021
Leased from Other Third Party:			
Anik F3	April 2007	118.7	April 2022
Ciel II	December 2008	129	January 2019

- (1) See Note 18 for further information on our Related Party Transactions with EchoStar.
- (2) We generally have the option to renew each lease on a year-to-year basis through the end of the useful life of the respective satellite.
- (3) We have the option to renew this lease for an additional five-year period. If we exercise our five-year renewal option, we have the option to renew this lease for an additional five years.

AWS-4 Satellites. On March 2, 2012, the FCC approved the transfer of 40 MHz of wireless spectrum licenses held by DBSD North America, Inc. (“DBSD North America”) and TerreStar Networks, Inc. (“TerreStar”) to us. On March 9, 2012, we completed the acquisitions of 100% of the equity of reorganized DBSD North America and substantially all of the assets of TerreStar, pursuant to which we acquired, among other things, certain satellite assets and 40 MHz of spectrum licenses held by DBSD North America (the “DBSD Transaction”) and TerreStar (the “TerreStar Transaction”), which licenses the FCC modified in March 2013 to add AWS-4 authority (“AWS-4”). See Note 14 for further information. As a result of the DBSD Transaction and the TerreStar Transaction, we acquired three AWS-4 satellites, including two in-orbit satellites (D1 and T1) and one satellite under construction (T2).

During the fourth quarter 2014, EchoStar purchased our rights to the T2 satellite for \$55 million. See Note 18 for further information.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Satellites	Launch Date	Degree Orbital Location	Estimated Useful Life (Years)
Owened:			
T1	July 2009	111.1	15
D1	April 2008	92.85	N/A

GAAP requires that a long-lived asset be reviewed for impairment when circumstances indicate that the carrying amount of the asset might not be recoverable. As of December 31, 2016 and 2015, it was determined that the T1 satellite met this criteria and therefore in the fourth quarter 2016 and 2015, we tested the T1 satellite for impairment. We concluded that the T1 satellite's fair value exceeded its carrying amount and no impairment was necessary for either year. As of December 31, 2016, we do not believe any triggering event has occurred which would indicate impairment for the D1 satellite. As of December 31, 2015, it was determined that the D1 satellite met this criteria and therefore in the fourth quarter 2015 we tested the D1 satellite and related ground equipment for impairment. We concluded that the carrying amount of the D1 satellite and related ground equipment exceeded their fair value determined under the cost approach. To arrive at fair value utilizing the cost approach, a replacement cost for the satellite was determined, which was then reduced for, among other things, depreciation and obsolescence. As a result of this assessment, we wrote down the net book value of the D1 satellite from \$150 million to \$55 million and the net book value of the related ground equipment from \$28 million to zero and recorded an impairment charge of \$123 million in "Impairment of long-lived assets" on our Consolidated Statements of Operations and Comprehensive Income (Loss) for the year ended December 31, 2015. The estimates used in our fair value analysis are considered Level 3 in the fair value hierarchy. As of December 31, 2016, the net book value for T1 and D1 was \$272 million and \$55 million, respectively.

Satellite Anomalies

Operation of our DISH branded pay-TV service requires that we have adequate satellite transmission capacity for the programming that we offer. While we generally have had in-orbit satellite capacity sufficient to transmit our existing channels and some backup capacity to recover the transmission of certain critical programming, our backup capacity is limited.

In the event of a failure or loss of any of our owned or leased satellites, we may need to acquire or lease additional satellite capacity or relocate one of our other owned or leased satellites and use it as a replacement for the failed or lost satellite. Such a failure could result in a prolonged loss of critical programming or a significant delay in our plans to expand programming as necessary to remain competitive and thus may have a material adverse effect on our business, financial condition and results of operations.

In the past, certain of our owned and leased satellites have experienced anomalies, some of which have had a significant adverse impact on their remaining useful life and/or commercial operation. There can be no assurance that future anomalies will not impact the remaining useful life and/or commercial operation of any of the owned and leased satellites in our fleet. See Note 2 "Impairment of Long-Lived Assets" for further information on evaluation of impairment. There can be no assurance that we can recover critical transmission capacity in the event one or more of our owned or leased in-orbit satellites were to fail. We generally do not carry commercial launch or in-orbit insurance on any of the satellites that we use, other than certain satellites leased from third parties, and therefore, we will bear the risk associated with any uninsured launch or in-orbit satellite failures. In light of current favorable market conditions, in January 2016, we procured commercial launch and in-orbit insurance (for a period of one year following launch) for the EchoStar XVIII satellite, which was launched on June 18, 2016.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Intangible Assets

As of December 31, 2016 and 2015, our identifiable intangibles subject to amortization consisted of the following:

	As of			
	December 31, 2016		December 31, 2015	
	Intangible Assets	Accumulated Amortization	Intangible Assets	Accumulated Amortization
	(In thousands)			
Technology-based	\$ 9,773	\$ (994)	\$ 14,510	\$ (6,297)
Trademarks	22,499	(6,271)	16,257	(2,512)
Contract-based	8,650	(8,650)	8,650	(8,650)
Customer relationships	2,900	(2,900)	2,900	(2,900)
Total	\$ 43,822	\$ (18,815)	\$ 42,317	\$ (20,359)

These identifiable intangibles are included in “Other noncurrent assets, net” on our Consolidated Balance Sheets. Amortization of these intangible assets is recorded on a straight line basis over an average finite useful life primarily ranging from approximately five to 20 years. Amortization was \$6 million, \$9 million and \$6 million for the years ended December 31, 2016, 2015 and 2014 respectively.

Estimated future amortization of our identifiable intangible assets as of December 31, 2016 is as follows (in thousands):

For the Years Ended December 31,	
2017	\$ 5,082
2018	5,082
2019	4,950
2020	3,742
2021	1,214
Thereafter	4,937
Total	\$ 25,007

Goodwill

The excess of our investments in consolidated subsidiaries over net tangible and identifiable intangible asset value at the time of the investment is recorded as goodwill and is not subject to amortization but is subject to impairment testing annually or whenever indicators of impairment arise. As of December 31, 2016 and 2015, our goodwill was \$120 million, which relates to our wireless segment. In conducting our annual impairment test for 2016, we performed a qualitative assessment, which considered several factors, including, among others, macroeconomic conditions, industry and market conditions, and relevant company specific events and perception of the market. In contemplating all factors in their totality, we determined that the fair value of our wireless segment, which consists of a single reporting unit, was in excess of the carrying amount.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

FCC Authorizations

As of December 31, 2016 and 2015, our FCC Authorizations consisted of the following:

	As of December 31,	
	2016	2015
	(In thousands)	
DBS Licenses	\$ 611,794	\$ 611,794
700 MHz Licenses	711,871	711,871
MVDDS Licenses	24,000	24,000
AWS-4 Licenses	1,949,000	1,949,000
H-Block Licenses	1,671,506	1,671,506
AWS-3 Licenses	9,890,389	9,890,389
Capitalized Interest (1)	1,640,173	809,044
Total	\$ 16,498,733	\$ 15,667,604

- (1) The change in capitalized interest as of December 31, 2016 resulted primarily from capitalized interest related to the AWS-3 Licenses, on which we began capitalizing interest as of October 27, 2015. See Note 2 for further information.

Other

During the third quarter 2016, we made a refundable payment to a third party in connection with a potential asset purchase. This amount is recorded in “Other current assets” on our Consolidated Balance Sheets.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

9. Long-Term Debt and Capital Lease Obligations

Fair Value of our Long-Term Debt

The following table summarizes the carrying amount and fair value of our debt facilities as of December 31, 2016 and 2015:

	As of			
	December 31, 2016		December 31, 2015	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
(In thousands)				
7 1/8% Senior Notes due 2016 (1)	\$ —	\$ —	\$ 1,500,000	\$ 1,506,750
4 5/8% Senior Notes due 2017 (2)	900,000	913,887	900,000	922,770
4 1/4% Senior Notes due 2018	1,200,000	1,228,464	1,200,000	1,207,560
7 7/8% Senior Notes due 2019	1,400,000	1,559,698	1,400,000	1,525,440
5 1/8% Senior Notes due 2020	1,100,000	1,141,866	1,100,000	1,100,000
6 3/4% Senior Notes due 2021	2,000,000	2,178,880	2,000,000	2,021,020
5 7/8% Senior Notes due 2022	2,000,000	2,114,780	2,000,000	1,889,780
5% Senior Notes due 2023	1,500,000	1,500,315	1,500,000	1,297,500
5 7/8% Senior Notes due 2024	2,000,000	2,064,000	2,000,000	1,765,000
7 3/4% Senior Notes due 2026	2,000,000	2,270,900	—	—
3 3/8% Convertible Notes due 2026	3,000,000	3,431,130	—	—
Other notes payable	47,844	47,844	30,996	30,996
Subtotal	17,147,844	\$ 18,451,764	13,630,996	\$ 13,266,816
Unamortized debt discount on the 3 3/8% Convertible Notes due 2026	(752,386)		—	
Unamortized deferred financing costs and other debt discounts, net	(52,704)		(41,563)	
Capital lease obligations (3)	136,146		166,492	
Total long-term debt and capital lease obligations (including current portion)	\$ 16,478,900		\$ 13,755,925	

- (1) On February 1, 2016, we redeemed the principal balance of our 7 1/8% Senior Notes due 2016.
- (2) Our 4 5/8% Senior Notes due 2017 mature on July 15, 2017 and have been reclassified to “Current portion of long-term debt and capital lease obligations” on our Consolidated Balance Sheets as of December 31, 2016.
- (3) Disclosure regarding fair value of capital leases is not required.

We estimated the fair value of our publicly traded long-term debt using market prices in less active markets (Level 2).

Our Senior Notes are:

- general unsecured senior obligations of DISH DBS Corporation (“DISH DBS”);
- ranked equally in right of payment with all of DISH DBS’ and the guarantors’ existing and future unsecured senior debt; and
- ranked effectively junior to our and the guarantors’ current and future secured senior indebtedness up to the value of the collateral securing such indebtedness.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

The indentures related to our Senior Notes contain restrictive covenants that, among other things, impose limitations on the ability of DISH DBS and its restricted subsidiaries to:

- incur additional debt;
- pay dividends or make distributions on DISH DBS' capital stock or repurchase DISH DBS' capital stock;
- make certain investments;
- create liens or enter into sale and leaseback transactions;
- enter into transactions with affiliates;
- merge or consolidate with another company; and
- transfer or sell assets.

In the event of a change of control, as defined in the related indentures, we would be required to make an offer to repurchase all or any part of a holder's Senior Notes at a purchase price equal to 101% of the aggregate principal amount thereof, together with accrued and unpaid interest thereon, to the date of repurchase.

4 5/8% Senior Notes due 2017

On May 16, 2012, we issued \$900 million aggregate principal amount of our five-year 4 5/8% Senior Notes due July 15, 2017. Interest accrues at an annual rate of 4 5/8% and is payable semi-annually in cash, in arrears on January 15 and July 15 of each year.

The 4 5/8% Senior Notes are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a "make-whole" premium, as defined in the related indenture, together with accrued and unpaid interest.

4 1/4% Senior Notes due 2018

On April 5, 2013, we issued \$1.2 billion aggregate principal amount of our five-year 4 1/4% Senior Notes due April 1, 2018. Interest accrues at an annual rate of 4 1/4% and is payable semi-annually in cash in arrears on April 1 and October 1 of each year.

The 4 1/4% Senior Notes are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a "make-whole" premium, as defined in the related indenture, together with accrued and unpaid interest.

7 7/8% Senior Notes due 2019

On August 17, 2009 and October 5, 2009, we issued \$1.0 billion and \$400 million, respectively, aggregate principal amount of our ten-year 7 7/8% Senior Notes due September 1, 2019. Interest accrues at an annual rate of 7 7/8% and is payable semi-annually in cash, in arrears on March 1 and September 1 of each year.

The 7 7/8% Senior Notes are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a "make-whole" premium, as defined in the related indenture, together with accrued and unpaid interest.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

5 1/8% Senior Notes due 2020

On April 5, 2013, we issued \$1.1 billion aggregate principal amount of our seven-year 5 1/8% Senior Notes due May 1, 2020. Interest accrues at an annual rate of 5 1/8% and is payable semi-annually in cash in arrears on May 1 and November 1 of each year.

The 5 1/8% Senior Notes are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a “make-whole” premium, as defined in the related indenture, together with accrued and unpaid interest.

6 3/4% Senior Notes due 2021

On May 5, 2011, we issued \$2.0 billion aggregate principal amount of our ten-year 6 3/4% Senior Notes due June 1, 2021. Interest accrues at an annual rate of 6 3/4% and is payable semi-annually in cash, in arrears on June 1 and December 1 of each year.

The 6 3/4% Senior Notes are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a “make-whole” premium, as defined in the related indenture, together with accrued and unpaid interest.

5 7/8% Senior Notes due 2022

On May 16, 2012 and July 26, 2012, we issued \$1.0 billion and \$1.0 billion, respectively, aggregate principal amount of our ten-year 5 7/8% Senior Notes due July 15, 2022. Interest accrues at an annual rate of 5 7/8% and is payable semi-annually in cash, in arrears on January 15 and July 15 of each year.

The 5 7/8% Senior Notes due 2022 are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a “make-whole” premium, as defined in the related indenture, together with accrued and unpaid interest.

5% Senior Notes due 2023

On December 27, 2012, we issued \$1.5 billion aggregate principal amount of our 5% Senior Notes due March 15, 2023. Interest accrues at an annual rate of 5% and is payable semi-annually in cash, in arrears on March 15 and September 15 of each year.

The 5% Senior Notes are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a “make-whole” premium, as defined in the related indenture, together with accrued and unpaid interest.

5 7/8% Senior Notes due 2024

On November 20, 2014, we issued \$2.0 billion aggregate principal amount of our ten-year 5 7/8% Senior Notes due November 15, 2024. Interest accrues at an annual rate of 5 7/8% and is payable semi-annually in cash, in arrears on May 15 and November 15 of each year.

The 5 7/8% Senior Notes due 2024 are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a “make-whole” premium, as defined in the related indenture, together with accrued and unpaid interest. Prior to November 15, 2017, we may also redeem up to 35.0% of the 5 7/8% Senior Notes due 2024 at a specified premium with the net cash proceeds from certain equity offerings or capital contributions.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

7 3/4% Senior Notes due 2026

On June 13, 2016, we issued \$2.0 billion aggregate principal amount of our ten-year 7 3/4% Senior Notes due July 1, 2026. Interest accrues at an annual rate of 7 3/4% and is payable semi-annually in cash, in arrears on January 1 and July 1 of each year, commencing on January 1, 2017.

The 7 3/4% Senior Notes are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a “make-whole” premium, as defined in the related indenture, together with accrued and unpaid interest. Prior to July 1, 2019, we may also redeem up to 35% of the 7 3/4% Senior Notes at a specified premium with the net cash proceeds from certain equity offerings or capital contributions.

3 3/8% Convertible Notes due 2026

On August 8, 2016, we issued \$3.0 billion aggregate principal amount of the Convertible Notes due August 15, 2026 in a private unregistered offering. Interest accrues at an annual rate of 3 3/8% and is payable semi-annually in cash, in arrears on February 15 and August 15 of each year, commencing February 15, 2017.

The Convertible Notes due 2026 are:

- our general unsecured obligations;
- ranked senior in right of payment to any future indebtedness that is expressly subordinated in right of payment to the Convertible Notes due 2026;
- ranked equally in right of payment with all of our existing and future unsecured senior indebtedness;
- ranked effectively junior to any of our existing and future secured indebtedness to the extent of the value of the assets securing such indebtedness;
- ranked structurally junior to all indebtedness and other liabilities of our subsidiaries; and
- not guaranteed by our subsidiaries.

We may not redeem the Convertible Notes due 2026 prior to the maturity date. If a “fundamental change” (as defined in the related indenture) occurs prior to the maturity date of the Convertible Notes due 2026, holders may require us to repurchase for cash all or part of their Convertible Notes due 2026 at a specified make-whole price equal to 100% of the principal amount of such Convertible Notes due 2026, plus accrued and unpaid interest to, but not including, the fundamental change repurchase date.

The indenture related to the Convertible Notes due 2026 does not contain any financial covenants and does not restrict us from paying dividends, issuing or repurchasing our other securities, issuing new debt (including secured debt) or repaying or repurchasing our debt.

Subject to the terms of the related indenture, the Convertible Notes due 2026 may be converted at an initial conversion rate of 15.3429 shares of our Class A common stock per \$1,000 principal amount of Convertible Notes due 2026 (equivalent to an initial conversion price of approximately \$65.18 per share of our Class A common stock) (the “Initial Conversion Rate”), at any time on or after March 15, 2026 through the second scheduled trading day preceding the maturity date. Holders of the Convertible Notes due 2026 will also have the right to convert the Convertible Notes due 2026 at the Initial Conversion Rate prior to March 15, 2026, but only upon the occurrence of specified events described in the related indenture. The conversion rate is subject to anti-dilution adjustments if certain events occur.

In accordance with accounting guidance on embedded conversion features, we valued and bifurcated the conversion option associated with the Convertible Notes due 2026 (the “equity component”) from the host debt instrument. The \$774 million initial value of the equity component on the Convertible Notes due 2026 was recorded in “Additional paid-in capital” within “Stockholders’ equity (deficit)” on our Consolidated Balance Sheets with the offset being recorded as the debt discount. The resulting debt discount on the Convertible Notes due 2026 is being amortized to interest expense at an effective interest rate of 7% over the ten-year term of the Convertible Notes due 2026. This interest expense was recorded in “Interest expense, net of amounts capitalized” within “Other Income (Expense)” on our Consolidated Statements of Operations and Comprehensive Income (Loss).

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Convertible Note Hedge and Warrant Transactions

In connection with the offering of the Convertible Notes due 2026, we entered into convertible note hedge transactions with certain option counterparties. The convertible note hedge transactions cover, subject to anti-dilution adjustments substantially similar to those applicable to the Convertible Notes due 2026, the number of shares of our Class A common stock underlying the Convertible Notes due 2026, which initially gives us the option to purchase approximately 46 million shares of our Class A common stock at a price of approximately \$65.18 per share. The total cost of the convertible note hedge transactions was \$635 million. Concurrently with entering into the convertible note hedge transactions, we also entered into warrant transactions with each option counterparty whereby we sold to such option counterparty warrants to purchase, subject to customary anti-dilution adjustments, up to the same number of shares of our Class A common stock, which initially gives the option counterparties the option to purchase approximately 46 million shares of our Class A common stock at a price of approximately \$86.08 per share. We received \$376 million in cash proceeds from the sale of these warrants. For us, the economic effect of these transactions is to effectively raise the initial conversion price from approximately \$65.18 per share of our Class A common stock to approximately \$86.08 per share of our Class A common stock (thus effectively raising the conversion premium on the Convertible Notes due 2026 from approximately 32.5% to approximately 75%). In accordance with accounting guidance on hedge and warrant transactions, the net cost incurred in connection with the convertible note hedge and warrant transactions are recorded as a reduction in “Additional paid-in capital” within “Stockholders’ equity (deficit)” on our Consolidated Balance Sheets as of December 31, 2016.

We will not be required to make any cash payments to each option counterparty or its affiliates upon the exercise of the options that are a part of the convertible note hedge transactions, but will be entitled to receive from them a number of shares of Class A common stock, an amount of cash or a combination thereof. This consideration is generally based on the amount by which the market price per share of Class A common stock, as measured under the terms of the convertible note hedge transactions, is greater than the strike price of the convertible note hedge transactions during the relevant valuation period under the convertible note hedge transactions. Additionally, if the market price per share of Class A common stock, as measured under the terms of the warrant transactions, exceeds the strike price of the warrants during the measurement period at the maturity of the warrants, we will owe each option counterparty a number of shares of Class A common stock in an amount based on the excess of such market price per share of Class A common stock over the strike price of the warrants. However, as specified under the terms of the warrant transactions, we may elect to settle the warrants in cash.

Interest on Long-Term Debt

	Semi-Annual Payment Dates	Annual Debt Service Requirements (In thousands)
4 5/8% Senior Notes due 2017	January 15 and July 15	\$ 41,625
4 1/4% Senior Notes due 2018	April 1 and October 1	\$ 51,000
7 7/8% Senior Notes due 2019	March 1 and September 1	\$ 110,250
5 1/8% Senior Notes due 2020	May 1 and November 1	\$ 56,375
6 3/4% Senior Notes due 2021	June 1 and December 1	\$ 135,000
5 7/8% Senior Notes due 2022	January 15 and July 15	\$ 117,500
5% Senior Notes due 2023	March 15 and September 15	\$ 75,000
5 7/8 % Senior Notes due 2024	May 15 and November 15	\$ 117,500
7 3/4 % Senior Notes due 2026	January 1 and July 1	\$ 155,000
3 3/8 % Convertible Notes due 2026	February 15 and August 15	\$ 101,250

Our ability to meet our debt service requirements will depend on, among other factors, the successful execution of our business strategy, which is subject to uncertainties and contingencies beyond our control.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Other Long-Term Debt and Capital Lease Obligations

Other long-term debt and capital lease obligations consisted of the following:

	As of December 31,	
	2016	2015
	(In thousands)	
Satellites and other capital lease obligations	\$ 136,146	\$ 166,492
Notes payable related to satellite vendor financing and other debt payable in installments through 2031 with interest rates ranging from approximately 1.9% to 8.8%	47,844	30,996
Total	183,990	197,488
Less: current portion	(37,580)	(34,000)
Other long-term debt and capital lease obligations, net of current portion	\$ 146,410	\$ 163,488

Capital Lease Obligations

Anik F3. Anik F3, an FSS satellite, was launched and commenced commercial operation in April 2007. This satellite is accounted for as a capital lease and depreciated over the term of the satellite service agreement. We have leased 100% of the Ku-band capacity on Anik F3 for a period of 15 years.

Ciel II. Ciel II, a Canadian DBS satellite, was launched in December 2008 and commenced commercial operation in February 2009. This satellite is accounted for as a capital lease and depreciated over the term of the satellite service agreement. We have leased 100% of the capacity on Ciel II for an initial 10 year term.

As of December 31, 2016 and 2015, we had \$500 million capitalized for the estimated fair value of satellites acquired under capital leases included in "Property and equipment, net," with related accumulated depreciation of \$365 million and \$322 million, respectively. In our Consolidated Statements of Operations and Comprehensive Income (Loss), we recognized \$43 million in depreciation expense on satellites acquired under capital lease agreements during each of the years ended December 31, 2016, 2015 and 2014.

Future minimum lease payments under the capital lease obligations, together with the present value of the net minimum lease payments as of December 31, 2016 are as follows (in thousands):

For the Years Ended December 31,	
2017	\$ 76,297
2018	75,935
2019	50,320
2020	48,000
2021	48,000
Thereafter	16,000
Total minimum lease payments	314,552
Less: Amount representing lease of the orbital location and estimated executory costs (primarily insurance and maintenance) including profit thereon, included in total minimum lease payments	(153,360)
Net minimum lease payments	161,192
Less: Amount representing interest	(25,046)
Present value of net minimum lease payments	136,146
Less: Current portion	(33,412)
Long-term portion of capital lease obligations	\$ 102,734

The summary of future maturities of our outstanding long-term debt as of December 31, 2016 is included in the commitments table in Note 14.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

10. Income Taxes and Accounting for Uncertainty in Income Taxes

Income Taxes

Our income tax policy is to record the estimated future tax effects of temporary differences between the tax bases of assets and liabilities and amounts reported on our Consolidated Balance Sheets, as well as probable operating loss, tax credit and other carryforwards. Deferred tax assets are offset by valuation allowances when we believe it is more likely than not that net deferred tax assets will not be realized. We periodically evaluate our need for a valuation allowance. Determining necessary valuation allowances requires us to make assessments about historical financial information as well as the timing of future events, including the probability of expected future taxable income and available tax planning opportunities.

We file consolidated tax returns in the U.S. The income taxes of domestic and foreign subsidiaries not included in the U.S. tax group are presented in our consolidated financial statements on a separate return basis for each tax paying entity.

As of December 31, 2016, we had no net operating loss carryforwards (“NOLs”) for federal income tax purposes and \$27 million of NOL benefit for state income tax purposes, which are partially offset by a valuation allowance. The state NOLs begin to expire in the year 2017. In addition, there are \$57 million of tax benefits related to credit carryforwards which are partially offset by a valuation allowance. The state credit carryforwards began to expire in 2015.

The components of the (benefit from) provision for income taxes were as follows:

	For the Years Ended December 31,		
	2016	2015	2014
	(In thousands)		
Current (benefit) provision:			
Federal	\$ 290,378	\$ 144,990	\$ 180,282
State	29,512	18,811	(44,565)
Foreign	10,187	(3,517)	6,588
Total current (benefit) provision	330,077	160,284	142,305
Deferred (benefit) provision:			
Federal	469,851	165,294	310,977
State	35,618	30,059	15,776
Foreign	—	—	(190,253)
Increase (decrease) in valuation allowance	1,463	11,039	(1,965)
Total deferred (benefit) provision	506,932	206,392	134,535
Total (benefit) provision	\$ 837,009	\$ 366,676	\$ 276,840

Our \$2.306 billion of “Income (loss) before income taxes” on our Consolidated Statements of Operations and Comprehensive Income (Loss) included income of \$8 million related to our foreign operations.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

The following table shows the principal reasons for the difference between the effective income tax rate and the statutory federal tax rate:

	For the Years Ended December 31,		
	2016	2015	2014
	% of pre-tax income/(loss)		
Statutory rate	35.0	35.0	35.0
State income taxes, net of federal benefit	2.5	3.3	1.1
Reversal of uncertain tax positions	(0.8)	(1.0)	(3.5)
Foreign tax planning strategies, net of federal benefit (1)	—	—	(9.8)
Amounts reclassified from accumulated other comprehensive income (loss) (2)	—	(5.5)	—
Increase (decrease) in valuation allowance	0.1	1.0	(0.2)
Other, net	(0.5)	(0.5)	0.4
Total (benefit) provision for income taxes	36.3	32.3	23.0

- (1) Our effective tax rate for the year ended December 31, 2014 was favorably impacted by tax planning strategies related to the tax structure of certain foreign legal entities, net of federal benefit, totaling \$118 million.
- (2) Our effective tax rate for the year ended December 31, 2015 was favorably impacted by a \$63 million credit that was previously recorded in “Accumulated other comprehensive income (loss)” and was released to our income tax provision during the year ended December 31, 2015. Prior to December 31, 2012, we had established a valuation allowance against all deferred tax assets that were capital in nature. At December 31, 2012, it was determined that these deferred tax assets were realizable and the valuation allowance was released, including the valuation allowance related to a specific portfolio of available-for-sale securities for which changes in fair value had historically been recognized as a separate component of “Accumulated other comprehensive income (loss).” Under the intra-period tax allocation rules, a credit of \$63 million was recorded in “Accumulated other comprehensive income (loss)” on our Consolidated Balance Sheets related to the release of this valuation allowance. We elected to use the aggregate portfolio method to determine when the \$63 million would be released from “Accumulated other comprehensive income (loss)” to “Income tax (provision) benefit, net” on our Consolidated Statements of Operations and Comprehensive Income (Loss). Under the aggregate portfolio approach, the intra-period tax allocation remaining in “Accumulated other comprehensive income (loss)” is not released to “Income tax (provision) benefit, net” until such time that the specific portfolio of available-for-sale securities that generated the original intra-period allocation is liquidated. During the first quarter 2015, this specific available-for-sale security portfolio was liquidated and the \$63 million credit that was previously recorded in “Accumulated other comprehensive income (loss)” was released to “Income tax (provision) benefit, net.”

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Deferred taxes arise because of the differences in the book and tax bases of certain assets and liabilities. Significant components of deferred tax assets and liabilities were as follows:

	As of December 31,	
	2016	2015
	(In thousands)	
Deferred tax assets:		
NOL, credit and other carryforwards	\$ 56,498	\$ 69,558
Accrued expenses	57,418	41,081
Stock-based compensation	16,606	15,753
Unrealized (gains) losses on available for sale and other investments	10,827	—
Deferred revenue	19,064	27,980
Total deferred tax assets	160,413	154,372
Valuation allowance	(22,606)	(21,143)
Deferred tax asset after valuation allowance	137,807	133,229
Deferred tax liabilities:		
Depreciation	(914,487)	(994,026)
FCC authorizations and other intangible amortization	(1,379,735)	(975,725)
Unrealized (gains) losses on available for sale and other investments	—	(82,535)
Bases difference in partnerships and cost method investments (1)	(366,937)	(138,160)
Discount on convertible notes and convertible note hedge transaction, net	(47,908)	—
Other liabilities	(24,221)	(27,572)
Total deferred tax liabilities	(2,733,288)	(2,218,018)
Net deferred tax asset (liability)	\$ (2,595,481)	\$ (2,084,789)

(1) Included in this line item are deferred taxes related to, among other things, our non-controlling investments in Northstar Spectrum and SNR HoldCo, including deferred taxes created by the tax amortization of the Northstar Licenses and SNR Licenses. Also included in this line item are deferred taxes related to our cost method investments, including our cost method investments in the Tracking Stock.

Accounting for Uncertainty in Income Taxes

In addition to filing federal income tax returns, we and one or more of our subsidiaries file income tax returns in all states that impose an income tax and a small number of foreign jurisdictions where we have immaterial operations. We are subject to U.S. federal, state and local income tax examinations by tax authorities for the years beginning in 2005 due to the carryover of previously incurred NOLs. We are currently under a federal income tax examination for fiscal years 2008 through 2012.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

A reconciliation of the beginning and ending amount of unrecognized tax benefits included in “Long-term deferred revenue, distribution and carriage payments and other long-term liabilities” on our Consolidated Balance Sheets was as follows:

Unrecognized tax benefit	For the Years Ended December 31,		
	2016	2015	2014
	(In thousands)		
Balance as of beginning of period	\$ 335,933	\$ 207,675	\$ 151,353
Additions based on tax positions related to the current year	40,492	135,937	69,643
Additions based on tax positions related to prior years	21,797	22,483	55,761
Reductions based on tax positions related to prior years	(34,106)	(22,697)	(18,646)
Reductions based on tax positions related to settlements with taxing authorities	(3,628)	(2,648)	(42,023)
Reductions based on tax positions related to the lapse of the statute of limitations	(3,118)	(4,817)	(8,413)
Balance as of end of period	\$ 357,370	\$ 335,933	\$ 207,675

We have \$200 million in unrecognized tax benefits that, if recognized, could favorably affect our effective tax rate. We do not expect any material portion of this amount to be paid or settled within the next twelve months.

Accrued interest and penalties on uncertain tax positions are recorded as a component of “Interest expense, net of amounts capitalized” and “Other, net,” respectively, on our Consolidated Statements of Operations and Comprehensive Income (Loss). During the year ended December 31, 2016 and 2015, we recorded \$11 million and \$3 million in net interest and penalty expense to earnings, respectively. During the year ended December 31, 2014, we recorded a credit of \$3 million in net interest and penalty expense to earnings. Accrued interest and penalties were \$26 million and \$15 million at December 31, 2016 and 2015, respectively. The above table excludes these amounts.

11. Stockholders’ Equity (Deficit)

Capital Stock and Additional Paid-In Capital

Our certificate of incorporation authorizes the following capital stock: (i) 1,600,000,000 shares of Class A common stock, par value \$0.01 per share; (ii) 800,000,000 shares of Class B common stock, par value \$0.01 per share; (iii) 800,000,000 shares of Class C common stock, par value \$0.01 per share; and (iv) 20,000,000 shares of preferred stock, par value \$0.01 per share. As of December 31, 2016 and 2015, there were no outstanding shares of Class C common stock or preferred stock.

The Class A, Class B and Class C common stock are equivalent except for voting rights. Holders of Class A and Class C common stock are entitled to one vote per share and holders of Class B common stock are entitled to 10 votes per share. Each share of Class B and Class C common stock is convertible, at the option of the holder, into one share of Class A common stock. Our Class A common stock is publicly traded on the NASDAQ Global Select Market under the symbol “DISH.” Upon a change in control of DISH Network, each holder of outstanding shares of Class C common stock is entitled to 10 votes for each share of Class C common stock held. Our principal stockholder owns the majority of all outstanding Class B common stock. Together with all other stockholders, he also owns outstanding Class A common stock.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Common Stock Repurchase Program

Our Board of Directors previously authorized the repurchase of up to \$1.0 billion of our outstanding Class A common stock. On November 2, 2016, our Board of Directors extended this authorization such that we are currently authorized to repurchase up to \$1.0 billion of outstanding shares of our Class A common stock through and including December 31, 2017. As of December 31, 2016, we may repurchase up to \$1.0 billion under this program. During the years ended December 31, 2016, 2015 and 2014, there were no repurchases of our Class A common stock.

Treasury Stock

As of December 31, 2015, we held 56,118,260 shares of treasury stock. We account for our treasury stock using the cost method and all treasury share repurchases are reflected on our Consolidated Balance Sheets as a component of "Treasury stock, at cost." On February 11, 2016, our Board of Directors approved the retirement of our treasury stock. During the first quarter 2016, we retired all 56,118,260 shares of our treasury stock.

12. Employee Benefit Plans

Employee Stock Purchase Plan

Our employees participate in the DISH Network employee stock purchase plan (the "ESPP"), in which we are authorized to issue up to 2.8 million shares of Class A common stock. At December 31, 2016, we had 1.0 million shares of Class A common stock which remain available for issuance under the ESPP. Substantially all full-time employees who have been employed by us for at least one calendar quarter are eligible to participate in the ESPP. Employee stock purchases are made through payroll deductions. Under the terms of the ESPP, employees may not deduct an amount which would permit such employee to purchase our capital stock under all of our stock purchase plans at a rate which would exceed \$25,000 in fair value of capital stock in any one year. The purchase price of the stock is 85% of the closing price of the Class A common stock on the last business day of each calendar quarter in which such shares of Class A common stock are deemed sold to an employee under the ESPP. During the years ended December 31, 2016, 2015 and 2014, employee purchases of Class A common stock through the ESPP totaled approximately 0.2 million, 0.1 million and 0.1 million shares, respectively.

401(k) Employee Savings Plan

We sponsor a 401(k) Employee Savings Plan (the "401(k) Plan") for eligible employees. Voluntary employee contributions to the 401(k) Plan may be matched 50% by us, subject to a maximum annual contribution of \$2,500 per employee. Forfeitures of unvested participant balances which are retained by the 401(k) Plan may be used to fund matching and discretionary contributions. Our Board of Directors may also authorize an annual discretionary contribution to the 401(k) plan, subject to the maximum deductible limit provided by the Internal Revenue Code of 1986, as amended. These contributions may be made in cash or in our stock.

The following table summarizes the expense associated with our matching contributions and discretionary contributions:

Expense Recognized Related to the 401(k) Plan	For the Years Ended December 31,		
	2016	2015	2014
	(In thousands)		
Total matching contributions, net of forfeitures	\$ 6,546	\$ 6,145	\$ 6,222
Discretionary stock contributions, net of forfeitures	\$ 23,158	\$ 25,261	\$ 25,972

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

13. Stock-Based Compensation

Stock Incentive Plans

We maintain stock incentive plans to attract and retain officers, directors and key employees. Stock awards under these plans include both performance and non-performance based stock incentives. As of December 31, 2016, we had outstanding under these plans stock options to acquire 7.9 million shares of our Class A common stock and 1.3 million restricted stock units. Stock options granted on or prior to December 31, 2016 were granted with exercise prices equal to or greater than the market value of our Class A common stock at the date of grant and with a maximum term of approximately ten years. While historically we have issued stock awards subject to vesting, typically at the rate of 20% per year, some stock awards have been granted with immediate vesting and other stock awards vest only upon the achievement of certain company-specific subscriber, operational and/or financial goals. As of December 31, 2016, we had 67.6 million shares of our Class A common stock available for future grant under our stock incentive plans.

Exercise prices for stock options outstanding and exercisable as of December 31, 2016 were as follows:

	Options Outstanding			Options Exercisable		
	Number Outstanding as of December 31, 2016	Weighted- Average Remaining Contractual Life	Weighted- Average Exercise Price	Number Exercisable as of December 31, 2016	Weighted- Average Remaining Contractual Life	Weighted- Average Exercise Price
\$ — - \$ 10.00	208,553	1.50	\$ 6.31	208,553	1.50	\$ 6.31
\$ 10.01 - \$ 20.00	1,885,085	3.47	\$ 15.44	85,085	2.94	\$ 16.73
\$ 20.01 - \$ 30.00	1,617,876	4.41	\$ 26.64	1,067,876	4.22	\$ 25.98
\$ 30.01 - \$ 40.00	1,434,345	5.85	\$ 36.09	265,945	5.24	\$ 34.85
\$ 40.01 - \$ 50.00	428,900	9.08	\$ 46.22	7,800	2.03	\$ 42.84
\$ 50.01 - \$ 60.00	1,532,000	8.53	\$ 56.98	48,500	4.00	\$ 57.58
\$ 60.01 - \$ 70.00	796,250	7.11	\$ 66.56	189,050	7.16	\$ 65.51
\$ 70.01 - \$ 80.00	20,000	3.00	\$ 72.89	20,000	3.00	\$ 72.89
\$ — - \$ 80.00	7,923,009	5.69	\$ 36.21	1,892,809	4.27	\$ 29.97

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Stock Award Activity

Our stock option activity was as follows:

	For the Years Ended December 31,					
	2016		2015		2014	
	Options	Weighted-Average Exercise Price	Options	Weighted-Average Exercise Price	Options	Weighted-Average Exercise Price
Total options outstanding, beginning of period	6,845,685	\$ 31.13	11,725,823	\$ 24.51	14,058,574	\$ 21.71
Granted	1,901,000	\$ 54.41	452,000	\$ 69.11	667,750	\$ 63.23
Exercised	(431,092)	\$ 23.36	(1,884,938)	\$ 16.15	(2,724,301)	\$ 18.77
Forfeited and cancelled	(392,584)	\$ 50.03	(3,447,200)	\$ 21.78	(276,200)	\$ 32.26
Total options outstanding, end of period	7,923,009	\$ 36.21	6,845,685	\$ 31.13	11,725,823	\$ 24.51
Performance based options outstanding, end of period (1)	4,312,000	\$ 31.39	3,904,500	\$ 28.03	7,246,500	\$ 24.14
Exercisable at end of period	1,892,809	\$ 29.97	1,965,585	\$ 26.82	3,299,023	\$ 19.64

(1) These stock options are included in the caption “Total options outstanding, end of period.” See discussion of the 2005 LTIP, 2008 LTIP, 2013 LTIP and Other Employee Performance Awards below.

We realized tax benefits from stock awards exercised as follows:

	For the Years Ended December 31,		
	2016	2015	2014
	(In thousands)		
Tax benefit from stock awards exercised	\$ 5,006	\$ 33,716	\$ 52,366

Based on the closing market price of our Class A common stock on December 31, 2016, the aggregate intrinsic value of our stock options was as follows:

	As of December 31, 2016	
	Options Outstanding	Options Exercisable
	(In thousands)	
Aggregate intrinsic value	\$ 179,314	\$ 54,664

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Our restricted stock unit activity was as follows:

	For the Years Ended December 31,					
	2016		2015		2014	
	Restricted Stock Units	Weighted-Average Grant Date Fair Value	Restricted Stock Units	Weighted-Average Grant Date Fair Value	Restricted Stock Units	Weighted-Average Grant Date Fair Value
Total restricted stock units outstanding, beginning of period	1,382,250	\$ 32.01	1,798,331	\$ 32.31	1,943,497	\$ 29.09
Granted	67,060	\$ 56.35	62,530	\$ 68.79	316,500	\$ 63.57
Vested	(60)	\$ 49.15	(125,280)	\$ 63.92	(278,000)	\$ 45.04
Forfeited and cancelled	(113,250)	\$ 45.12	(353,331)	\$ 28.76	(183,666)	\$ 32.77
Total restricted stock units outstanding, end of period (1)	1,336,000	\$ 32.11	1,382,250	\$ 32.01	1,798,331	\$ 32.31

(1) All restricted stock units outstanding are Restricted Performance Units. See discussion of the 2005 LTIP, 2008 LTIP, 2013 LTIP and Other Employee Performance Awards below.

Long-Term Performance-Based Plans

2005 LTIP. During 2005, we adopted a long-term, performance-based stock incentive plan (the “2005 LTIP”). The 2005 LTIP provided stock options and restricted stock units, either alone or in combination, which vested over seven years at the rate of 10% per year during the first four years, and at the rate of 20% per year thereafter. Exercise of the stock awards was subject to the foregoing vesting schedule and a performance condition that a company-specific subscriber goal be achieved by March 31, 2015. The performance condition was not achieved, none of the awards became exercisable and the 2005 LTIP expired by its terms on March 31, 2015.

2008 LTIP. During 2008, we adopted a long-term, performance-based stock incentive plan (the “2008 LTIP”). The 2008 LTIP provided stock options and restricted stock units, either alone or in combination, which vested based on company-specific subscriber and financial goals. As of June 30, 2013, 100% of the eligible 2008 LTIP awards had vested.

2013 LTIP. During 2013, we adopted a long-term, performance-based stock incentive plan (the “2013 LTIP”). The 2013 LTIP provides stock options and restricted stock units in combination, which vest based on company-specific subscriber and financial goals. Exercise of the stock awards is contingent on achieving these goals by September 30, 2022.

Although no awards vest until the Company attains the performance goals, compensation related to the 2013 LTIP will be recorded based on management’s assessment of the probability of meeting the remaining goals. If the remaining goals are probable of being achieved, we will begin recognizing the associated non-cash, stock-based compensation expense on our Consolidated Statements of Operations and Comprehensive Income (Loss) over the estimated period to achieve the goal.

During the years ended December 31, 2015, 2014, 2013, we determined that 30%, 10% and 20%, respectively, of the 2013 LTIP performance goals were probable of achievement. During the year ended December 31, 2016, no additional 2013 LTIP performance goals were deemed probable of achievement. As a result, we recorded non-cash, stock-based compensation expense for the years ended December 31, 2016, 2015 and 2014, as indicated in the table below titled “Non-Cash, Stock-Based Compensation Expense Recognized.” As of December 31, 2016, approximately 20% of the 2013 LTIP awards had vested.

2017 LTIP. On December 2, 2016, we adopted a long-term, performance-based stock incentive plan (the “2017 LTIP”). The 2017 LTIP provides stock options, which vest based on company-specific subscriber and financial goals. Awards were initially granted under the 2017 LTIP as of January 1, 2017. Exercise of the stock awards is contingent on achieving these goals by December 31, 2020.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Although no awards vest until the Company attains the performance goals, compensation related to the 2017 LTIP will be recorded based on management's assessment of the probability of meeting the performance goals. If the performance goals are probable of being achieved, we will begin recognizing the associated non-cash, stock-based compensation expense on our Consolidated Statements of Operations and Comprehensive Income (Loss) over the estimated period to achieve the goal.

Other Employee Performance Awards. In addition to the above long-term, performance stock incentive plans, we have other stock awards that vest based on certain other company-specific subscriber, operational and/or financial goals. Exercise of these stock awards is contingent on achieving certain performance goals.

Additional compensation related to these awards will be recorded based on management's assessment of the probability of meeting the remaining performance goals. If the remaining goals are probable of being achieved, we will begin recognizing the associated non-cash, stock-based compensation expense on our Consolidated Statements of Operations and Comprehensive Income (Loss) over the estimated period to achieve the goal. See the table below titled "Estimated Remaining Non-Cash, Stock-Based Compensation Expense."

Although no awards vest until the performance goals are attained, we determined that certain goals were probable of achievement and, as a result, recorded non-cash, stock-based compensation expense for the years ended December 31, 2016, 2015 and 2014, as indicated in the table below titled "Non-Cash, Stock-Based Compensation Expense Recognized."

Given the competitive nature of our business, small variations in subscriber churn, gross new subscriber activation rates and certain other factors can significantly impact subscriber growth. Consequently, while it was determined that achievement of certain other company-specific subscriber, operational and/or financial goals was not probable as of December 31, 2016, that assessment could change in the future.

The non-cash, stock-based compensation expense associated with these awards was as follows:

Non-Cash, Stock-Based Compensation Expense Recognized	For the Years Ended December 31,		
	2016	2015	2014
		(In thousands)	
2013 LTIP	\$ 2,565	\$ 10,157	\$ 12,361
Other employee performance awards	1,424	1,694	14,095
Total non-cash, stock-based compensation expense recognized for performance based awards	\$ 3,989	\$ 11,851	\$ 26,456

Estimated Remaining Non-Cash, Stock-Based Compensation Expense	2013 LTIP	Other Employee Performance Awards
	(In thousands)	
Expense estimated to be recognized during 2017	\$ 7,067	\$ 1,070
Estimated contingent expense subsequent to 2017	40,469	134,580
Total estimated remaining expense over the term of the plan	\$ 47,536	\$ 135,650

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Of the 7.9 million stock options and 1.3 million restricted stock units outstanding under our stock incentive plans as of December 31, 2016, the following awards were outstanding pursuant to our performance-based stock incentive plans:

	As of December 31, 2016	
	Number of Awards	Weighted-Average Grant Price
Performance Based Stock Options		
2013 LTIP	1,472,000	\$ 43.50
Other employee performance awards	2,840,000	\$ 25.12
Total	4,312,000	\$ 31.39
Restricted Performance Units		
2013 LTIP	736,000	
Other employee performance awards	600,000	
Total	1,336,000	

Stock-Based Compensation

Total non-cash, stock-based compensation expense for all of our employees is shown in the following table for the years ended December 31, 2016, 2015 and 2014 and was allocated to the same expense categories as the base compensation for such employees:

	For the Years Ended December 31,		
	2016	2015	2014
		(In thousands)	
Subscriber-related	\$ 694	\$ 2,164	\$ 1,859
General and administrative	12,343	17,035	32,294
Total non-cash, stock-based compensation	\$ 13,037	\$ 19,199	\$ 34,153

As of December 31, 2016, our total unrecognized compensation cost related to our non-performance based unvested stock awards was \$22 million and will be recognized over a weighted-average period of approximately two years. Share-based compensation expense is recognized based on stock awards ultimately expected to vest.

Valuation

The fair value of each stock option granted for the years ended December 31, 2016, 2015 and 2014 was estimated at the date of the grant using a Black-Scholes option valuation model with the following assumptions:

Stock Options	For the Years Ended December 31,							
	2016		2015		2014			
Risk-free interest rate	1.06 %	- 2.27 %	1.40 %	- 2.19 %	1.80 %	- 2.84 %		
Volatility factor	26.12 %	- 33.37 %	26.42 %	- 36.22 %	28.53 %	- 38.62 %		
Expected term of options in years	5.4	- 10.0	5.5	- 7.8	5.5	- 9.0		
Weighted-average fair value of options granted	\$ 12.45	- \$ 26.86	\$ 16.14	- \$ 29.73	\$ 19.08	- \$ 29.20		

While we currently do not intend to declare dividends on our common stock, we may elect to do so from time to time. Accordingly, the dividend yield percentage used in the Black-Scholes option valuation model was set at zero for all periods. The Black-Scholes option valuation model was developed for use in estimating the fair value of traded stock options which have no vesting restrictions and are fully transferable. Consequently, our estimate of fair value may differ from other valuation models. Further, the Black-Scholes option valuation model requires the input of highly subjective assumptions. Changes in these subjective input assumptions can materially affect the fair value estimate.

We will continue to evaluate the assumptions used to derive the estimated fair value of our stock options as new events or changes in circumstances become known.

DISH NETWORK CORPORATION
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14. Commitments and Contingencies

Commitments

As of December 31, 2016, future maturities of our long-term debt, capital lease and contractual obligations are summarized as follows:

	Payments due by period						
	Total	2017	2018	2019	2020	2021	Thereafter
				(In thousands)			
Long-term debt obligations	\$ 17,147,844	\$ 904,168	\$ 1,204,274	\$ 1,404,385	\$ 1,104,503	\$ 2,004,626	\$ 10,525,888
Capital lease obligations	136,146	33,412	36,260	19,503	19,137	20,615	7,219
Interest expense on long-term debt and capital lease obligations	6,013,072	983,130	903,456	875,684	736,096	639,190	1,875,516
Satellite-related obligations	1,615,590	382,348	348,617	301,102	241,371	208,196	133,956
Operating lease obligations	139,673	41,334	25,266	18,954	13,728	9,332	31,059
Purchase obligations	2,202,987	1,765,669	275,669	130,230	16,386	8,833	6,200
Total	\$ 27,255,312	\$ 4,110,061	\$ 2,793,542	\$ 2,749,858	\$ 2,131,221	\$ 2,890,792	\$ 12,579,838

In certain circumstances the dates on which we are obligated to make these payments could be delayed. These amounts will increase to the extent that we procure launch and/or in-orbit insurance on our satellites or contract for the construction, launch or lease of additional satellites.

The table above does not include \$357 million of liabilities associated with unrecognized tax benefits that were accrued, as discussed in Note 10 and are included on our Consolidated Balance Sheets as of December 31, 2016. We do not expect any portion of this amount to be paid or settled within the next twelve months.

Wireless

DISH Network Spectrum

We have invested over \$5.0 billion since 2008 to acquire certain wireless spectrum licenses and related assets.

700 MHz Licenses. In 2008, we paid \$712 million to acquire certain 700 MHz E Block (“700 MHz”) wireless spectrum licenses, which were granted to us by the FCC in February 2009. At the time they were granted, these licenses were subject to certain interim and final build-out requirements. On October 29, 2013, the FCC issued an order approving a voluntary industry solution to resolve certain interoperability issues affecting the lower 700 MHz spectrum band (the “Interoperability Solution Order”), which requires us to reduce power emissions on our 700 MHz licenses. As part of the Interoperability Solution Order, the FCC, among other things, approved our request to modify the original interim and final build-out requirements associated with our 700 MHz licenses so that by March 2017, we must provide signal coverage and offer service to at least 40% of our total E Block population (the “Modified 700 MHz Interim Build-Out Requirement”). The FCC also approved our request to modify the 700 MHz Final Build-Out Requirement so that by March 2021, we must provide signal coverage and offer service to at least 70% of the population in each of our E Block license areas (the “Modified 700 MHz Final Build-Out Requirement”). While the modifications to our 700 MHz licenses provide us additional time to complete the build-out requirements, the reduction in power emissions could have an adverse impact on our ability to fully utilize our 700 MHz licenses. If the Modified 700 MHz Interim Build-Out Requirement is not met, the Modified 700 MHz Final Build-Out Requirement may be accelerated by one year, from March 2021 to March 2020, and we could face the reduction of license area(s). If the Modified 700 MHz Final Build-Out Requirement is not met, our authorization may terminate for the geographic portion of each license in which we are not providing service.

DISH NETWORK CORPORATION
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AWS-4 Licenses. On March 2, 2012, the FCC approved the transfer of 40 MHz of wireless spectrum licenses held by DBSD North America, Inc. (“DBSD North America”) and TerreStar Networks, Inc. (“TerreStar”) to us. On March 9, 2012, we completed the acquisition of 100% of the equity of reorganized DBSD North America (the “DBSD Transaction”) and substantially all of the assets of TerreStar (the “TerreStar Transaction”), pursuant to which we acquired, among other things, certain satellite assets and wireless spectrum licenses held by DBSD North America and TerreStar. The total consideration to acquire the DBSD North America and TerreStar assets was approximately \$2.860 billion.

On February 15, 2013, the FCC issued an order, which became effective on March 7, 2013, modifying our licenses to expand our terrestrial operating authority with AWS-4 authority (“AWS-4”). That order also mandated certain interim and final build-out requirements for the licenses. By March 2017, we must provide terrestrial signal coverage and offer terrestrial service to at least 40% of the aggregate population represented by all of the areas covered by the licenses (the “AWS-4 Interim Build-Out Requirement”). By March 2020, we were required to provide terrestrial signal coverage and offer terrestrial service to at least 70% of the population in each area covered by an individual license (the “AWS-4 Final Build-Out Requirement”).

On December 20, 2013, the FCC issued a further order that, among other things, extended the AWS-4 Final Build-Out Requirement by one year to March 2021 (the “Modified AWS-4 Final Build-Out Requirement”). If the AWS-4 Interim Build-Out Requirement is not met, the Modified AWS-4 Final Build-Out Requirement may be accelerated by one year, from March 2021 to March 2020. If the Modified AWS-4 Final Build-Out Requirement is not met, our terrestrial authorization for each license area in which we do not meet the requirement may terminate. The FCC’s December 20, 2013 order also conditionally waived certain FCC rules for our AWS-4 licenses to allow us to repurpose all 20 MHz of our uplink spectrum (2000-2020 MHz) for terrestrial downlink operations. On June 1, 2016, we notified the FCC that we had elected to use our AWS-4 uplink spectrum for terrestrial downlink operations, and effective June 7, 2016, the FCC modified our AWS-4 licenses, resulting in all 40 MHz of our AWS-4 spectrum being designated for terrestrial downlink operations.

H Block Licenses. On April 29, 2014, the FCC issued an order granting our application to acquire all 176 wireless spectrum licenses in the H Block auction. We paid approximately \$1.672 billion to acquire these H Block licenses, including clearance costs associated with the lower H Block spectrum. The H Block licenses are subject to certain interim and final build-out requirements. By April 2018, we must provide reliable signal coverage and offer service to at least 40% of the population in each area covered by an individual H Block license (the “H Block Interim Build-Out Requirement”). By April 2024, we must provide reliable signal coverage and offer service to at least 75% of the population in each area covered by an individual H Block license (the “H Block Final Build-Out Requirement”). If the H Block Interim Build-Out Requirement is not met, the H Block license term and the H Block Final Build-Out Requirement may be accelerated by two years (from April 2024 to April 2022) for each H Block license area in which we do not meet the requirement. If the H Block Final Build-Out Requirement is not met, our authorization for each H Block license area in which we do not meet the requirement may terminate.

MVDDS Licenses. We have multichannel video distribution and data service (“MVDDS”) licenses in 82 out of 214 geographical license areas, including Los Angeles, New York City, Chicago and several other major metropolitan areas. By August 2014, we were required to meet certain FCC build-out requirements related to our MVDDS licenses, and we are subject to certain FCC service rules applicable to these licenses. In January 2015, the FCC granted our application to extend the build-out requirements related to our MVDDS licenses. We now have until 2019 to provide “substantial service” on our MVDDS licenses, and the licenses expire in 2024. Our MVDDS licenses may be terminated, however, if we do not provide substantial service in accordance with the new build-out requirements.

In 2016, the MVDDS 5G Coalition, of which we are a member, filed a petition for rulemaking requesting the FCC to consider updating the rules to allow us to provide two-way 5G services using our MVDDS licenses. We cannot predict when or if the FCC will grant the petition and proceed with a rulemaking. If the FCC adopts rules that would allow us to provide two-way 5G services using our MVDDS licenses, the requests of OneWeb and others for authority to use the band for service from NGSO satellite systems may hinder our ability to provide 5G services using our MVDDS licenses.

DISH NETWORK CORPORATION
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Commercialization of Our Wireless Spectrum Licenses and Related Assets. We have made substantial investments to acquire certain wireless spectrum licenses and related assets. We will need to make significant additional investments or partner with others to, among other things, commercialize, build-out, and integrate these licenses and related assets, and any additional acquired licenses and related assets; and comply with regulations applicable to such licenses. Depending on the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such investments or partnerships could vary significantly. We may also determine that additional wireless spectrum licenses may be required to commercialize our wireless business and to compete with other wireless service providers.

Auction 1000. On February 10, 2016, we filed an application with the FCC to potentially participate as a bidder in the forward auction phase of Auction 1000. The available spectrum in each licensed geographic area in Auction 1000 is generally comprised of certain paired 5x5 spectrum blocks (5 MHz uplink spectrum and 5 MHz downlink spectrum). As a result, a nationwide footprint may be obtained by aggregating a single 5x5 spectrum block in each available licensed geographic area.

Auction 1000 has had multiple stages, with each stage having two phases. With respect to each stage, in the first phase, or reverse auction phase, participating television broadcasters “sell” their rights to use certain broadcast television spectrum in the 600 MHz frequency range to the FCC. Then following the first phase of a stage, in the second phase, or forward auction phase, the FCC will “resell” that spectrum to auction participants. In the event that certain criteria are not met within a particular stage for Auction 1000 to conclude, Auction 1000 then proceeds to a subsequent stage with less available spectrum than the immediately preceding stage and lower spectrum clearing targets.

Before the forward auction phase of Stage 1 of Auction 1000 began, a qualified bidder in the forward auction could make an upfront deposit of up to approximately \$5.4 billion. On July 15, 2016, the FCC announced that a subsidiary of DISH Network and 61 other applicants were qualified to participate in the forward auction. The FCC determined that bidding in Auction 1000 will be “anonymous,” which means that prior to and during the course of the auction, the FCC will not make public any information about a specific applicant’s upfront deposits or its bids. In addition, FCC rules restrict information that applicants may disclose about their participation in Auction 1000.

- *Stage 1:* The reverse auction phase of Stage 1 began on March 29, 2016 and ended on June 29, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 1, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 1 would have had to have exceeded approximately \$88.4 billion. The forward auction phase of Stage 1 included 100 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 1 began on August 16, 2016 and ended on August 30, 2016, but the aggregate bids of approximately \$23.1 billion did not exceed the approximately \$88.4 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 2.
- *Stage 2:* The reverse auction phase of Stage 2 began on September 13, 2016 and ended on October 13, 2016. Pursuant to the FCC’s procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 2, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 2 would have had to have exceeded approximately \$56.5 billion. The forward auction phase of Stage 2 included 90 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters’ indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 2 began and ended on October 19, 2016, but the aggregate bids of approximately \$21.5 billion did not exceed the approximately \$56.5 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 3.

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- *Stage 3:* The reverse auction phase of Stage 3 began on November 1, 2016 and ended on December 1, 2016. Pursuant to the FCC's procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 3, in order for Auction 1000 to have ultimately concluded, the aggregate bids in the forward auction phase of Stage 3 would have had to have exceeded approximately \$42.3 billion. The forward auction phase of Stage 3 included 80 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters' indicated availability of spectrum in the reverse auction phase. The forward auction phase of Stage 3 began and ended on December 5, 2016, but the aggregate bids of approximately \$19.7 billion did not exceed the approximately \$42.3 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to Stage 4.
- *Stage 4:* The reverse auction phase of Stage 4 began on December 13, 2016 and ended on January 13, 2017. Pursuant to the FCC's procedures for Auction 1000 and based on the results of the reverse auction phase of Stage 4, in order for Auction 1000 to ultimately conclude, the aggregate bids in the forward auction phase of Stage 4 would have to exceed approximately \$12.0 billion. The forward auction phase of Stage 4 includes 70 MHz of spectrum in over 90% of the available licensed geographic areas, based on the broadcasters' indicated availability of spectrum in the reverse auction phase. The clock bidding portion of the forward auction phase of Stage 4 began on January 18, 2017 and ended on February 10, 2017. The aggregate bids of approximately \$19.6 billion exceeded the approximately \$12.0 billion required for Auction 1000 to ultimately conclude. As a result, Auction 1000 moved to the assignment portion of the forward auction phase in which winning bidders in the clock bidding portion have the opportunity to bid for frequency-specific licenses. The assignment portion is scheduled to begin on March 6, 2017, and all assignment rounds are expected to end no later than March 30, 2017. During the assignment portion, the FCC rules restricting information that forward auction applicants may disclose about their participation in Auction 1000 remain in place. As mentioned above, a subsidiary of DISH Network qualified to participate in the forward auction. To the extent that it is the winning bidder for any 600 MHz licenses, we would expect to pay for such licenses from any upfront deposit made with the FCC and/or existing cash and marketable investment securities balances.

We may need to raise significant additional capital in the future to fund the efforts described above, which may not be available on acceptable terms or at all. There can be no assurance that we will be able to develop and implement a business model that will realize a return on these wireless spectrum licenses or that we will be able to profitably deploy the assets represented by these wireless spectrum licenses, which may affect the carrying amount of these assets and our future financial condition or results of operations.

DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses

Through our wholly-owned subsidiaries American II and American III, we have made over \$10.0 billion in certain non-controlling investments in Northstar Spectrum, the parent company of Northstar Wireless, and in SNR HoldCo, the parent company of SNR Wireless, respectively. Northstar Wireless and SNR Wireless each filed applications with the FCC to participate in Auction 97 (the "AWS-3 Auction") for the purpose of acquiring certain AWS-3 Licenses. Each of Northstar Wireless and SNR Wireless applied to receive bidding credits of 25% as designated entities under applicable FCC rules. In February 2015, one of our wholly-owned subsidiaries received a refund from the FCC of its \$400 million upfront payment made in 2014 related to the AWS-3 Auction.

Northstar Wireless was the winning bidder for AWS-3 Licenses with gross winning bid amounts totaling approximately \$7.845 billion, which after taking into account a 25% bidding credit, is approximately \$5.884 billion. SNR Wireless was the winning bidder for AWS-3 Licenses with gross winning bid amounts totaling approximately \$5.482 billion, which after taking into account a 25% bidding credit, is approximately \$4.112 billion. In addition to the net winning bids, SNR Wireless made a bid withdrawal payment of approximately \$8 million.

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On August 18, 2015, the FCC released a *Memorandum Opinion and Order*, FCC 15-104 (the “Order”) in which the FCC determined, among other things, that DISH Network has a controlling interest in, and is an affiliate of, Northstar Wireless and SNR Wireless, and therefore DISH Network’s revenues should be attributed to them, which in turn makes Northstar Wireless and SNR Wireless ineligible to receive the 25% bidding credits (approximately \$1.961 billion for Northstar Wireless and \$1.370 billion for SNR Wireless) (each a “Bidding Credit Amount” and collectively the “Bidding Credit Amounts”). Each of Northstar Wireless and SNR Wireless has filed a notice of appeal and petition for review of the Order with the United States Court of Appeals for the District of Columbia, challenging, among other things, the FCC’s determination that they are ineligible to receive the Bidding Credit Amounts. Oral arguments were presented to the Court on September 26, 2016. We cannot predict with any degree of certainty the timing or outcome of these proceedings.

On October 1, 2015, DISH Network, American II, American III, Northstar Wireless, SNR Wireless, and certain other entities holding certain interests in Northstar Wireless and SNR Wireless, entered into a series of arrangements with respect to the AWS-3 Licenses, as further described below.

Letters Exchanged between Northstar Wireless and the FCC Wireless Bureau. As outlined in letters exchanged between Northstar Wireless and the Wireless Telecommunications Bureau of the FCC (the “FCC Wireless Bureau”), Northstar Wireless paid the gross winning bid amounts for 261 AWS-3 Licenses (the “Northstar Licenses”) totaling approximately \$5.619 billion through the application of funds already on deposit with the FCC. Northstar Wireless also notified the FCC that it would not be paying the gross winning bid amounts for 84 AWS-3 Licenses totaling approximately \$2.226 billion.

As a result of the nonpayment of those gross winning bid amounts, the FCC retained those licenses and Northstar Wireless owed the FCC an additional interim payment of approximately \$334 million (the “Northstar Interim Payment”), which is equal to 15% of \$2.226 billion. The Northstar Interim Payment was recorded in “FCC auction expense” on our Consolidated Statements of Operations and Comprehensive Income (Loss) for the year ended December 31, 2015. Northstar Wireless immediately satisfied the Northstar Interim Payment through the application of funds already on deposit with the FCC and an additional loan from American II of approximately \$69 million. As a result, the FCC will not deem Northstar Wireless to be a “current defaulter” under applicable FCC rules.

In addition, the FCC Wireless Bureau acknowledged that Northstar Wireless’ nonpayment of those gross winning bid amounts does not constitute action involving gross misconduct, misrepresentation or bad faith. Therefore, the FCC concluded that such nonpayment will not affect the eligibility of Northstar Wireless, its investors (including DISH Network) or their respective affiliates to participate in future spectrum auctions (including Auction 1000 and any re-auction of the AWS-3 Licenses retained by the FCC). At this time, DISH Network (through itself, a subsidiary or another entity in which it may hold a direct or indirect interest) expects to participate in any re-auction of those AWS-3 Licenses.

If the winning bids from re-auction or other award of the AWS-3 Licenses retained by the FCC are greater than or equal to the winning bids of Northstar Wireless, no additional amounts will be owed to the FCC. However, if those winning bids are less than the winning bids of Northstar Wireless, then Northstar Wireless will be responsible for the difference less any overpayment of the Northstar Interim Payment (which will be recalculated as 15% of the winning bids from re-auction or other award) (the “Northstar Re-Auction Payment”). For example, if the winning bids in a re-auction are \$1, the Northstar Re-Auction Payment would be approximately \$1.892 billion, which is calculated as the difference between \$2.226 billion (the Northstar winning bid amounts) and \$1 (the winning bids from re-auction) less the resulting \$334 million overpayment of the Northstar Interim Payment. As discussed above, at this time, DISH Network (through itself, a subsidiary or another entity in which it may hold a direct or indirect interest) expects to participate in any re-auction. We cannot predict with any degree of certainty the timing or outcome of any re-auction or the amount of any Northstar Re-Auction Payment.

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Amendment to Northstar Wireless Credit Agreement. On October 1, 2015, American II, Northstar Wireless and Northstar Spectrum amended the First Amended and Restated Credit Agreement dated October 13, 2014, by and among American II, as Lender, Northstar Wireless, as Borrower, and Northstar Spectrum, as Guarantor (as amended, the “Northstar Credit Agreement”), to provide, among other things, that: (i) the Northstar Interim Payment and any Northstar Re-Auction Payment will be made by American II directly to the FCC and will be deemed as loans under the Northstar Credit Agreement; (ii) the FCC is a third-party beneficiary with respect to American II’s obligation to pay the Northstar Interim Payment and any Northstar Re-Auction Payment; (iii) in the event that the winning bids from re-auction or other award of the AWS-3 Licenses retained by the FCC are less than the winning bids of Northstar Wireless, the purchaser, assignee or transferee of any AWS-3 Licenses from Northstar Wireless is obligated to pay its pro-rata share of the difference (and Northstar Wireless remains jointly and severally liable for such pro-rata share); and (iv) during the period between the due date for the payments guaranteed under the FCC Northstar Guaranty (as discussed below) and the date such guaranteed payments are paid, Northstar Wireless’ payment obligations to American II under the Northstar Credit Agreement will be subordinated to such guaranteed payments.

DISH Network Guaranty in Favor of the FCC for Certain Northstar Wireless Obligations. On October 1, 2015, DISH Network entered into a guaranty in favor of the FCC (the “FCC Northstar Guaranty”) with respect to the Northstar Interim Payment (which was satisfied on October 1, 2015) and any Northstar Re-Auction Payment. The FCC Northstar Guaranty provides, among other things, that during the period between the due date for the payments guaranteed under the FCC Northstar Guaranty and the date such guaranteed payments are paid: (i) Northstar Wireless’ payment obligations to American II under the Northstar Credit Agreement will be subordinated to such guaranteed payments; and (ii) DISH Network or American II will withhold exercising certain rights as a creditor of Northstar Wireless.

Letters Exchanged between SNR Wireless and the FCC Wireless Bureau. As outlined in letters exchanged between SNR Wireless and the FCC Wireless Bureau, SNR Wireless paid the gross winning bid amounts for 244 AWS-3 Licenses (the “SNR Licenses”) totaling approximately \$4.271 billion through the application of funds already on deposit with the FCC and a portion of an additional loan from American III in an aggregate amount of approximately \$344 million (which included an additional bid withdrawal payment of approximately \$3 million). SNR Wireless also notified the FCC that it would not be paying the gross winning bid amounts for 113 AWS-3 Licenses totaling approximately \$1.211 billion.

As a result of the nonpayment of those gross winning bid amounts, the FCC retained those licenses and SNR Wireless owed the FCC an additional interim payment of approximately \$182 million (the “SNR Interim Payment”), which is equal to 15% of \$1.211 billion. The SNR Interim Payment was recorded in “FCC auction expense” on our Consolidated Statements of Operations and Comprehensive Income (Loss) for the year ended December 31, 2015. SNR Wireless immediately satisfied the SNR Interim Payment through a portion of an additional loan from American III in an aggregate amount of approximately \$344 million. As a result, the FCC will not deem SNR Wireless to be a “current defaulter” under applicable FCC rules.

In addition, the FCC Wireless Bureau acknowledged that SNR Wireless’ nonpayment of those gross winning bid amounts does not constitute action involving gross misconduct, misrepresentation or bad faith. Therefore, the FCC concluded that such nonpayment will not affect the eligibility of SNR Wireless, its investors (including DISH Network) or their respective affiliates to participate in future spectrum auctions (including Auction 1000 and any re-auction of the AWS-3 Licenses retained by the FCC). At this time, DISH Network (through itself, a subsidiary or another entity in which it may hold a direct or indirect interest) expects to participate in any re-auction of those AWS-3 Licenses.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

If the winning bids from re-auction or other award of the AWS-3 Licenses retained by the FCC are greater than or equal to the winning bids of SNR Wireless, no additional amounts will be owed to the FCC. However, if those winning bids are less than the winning bids of SNR Wireless, then SNR Wireless will be responsible for the difference less any overpayment of the SNR Interim Payment (which will be recalculated as 15% of the winning bids from re-auction or other award) (the “SNR Re-Auction Payment”). For example, if the winning bids in a re-auction are \$1, the SNR Re-Auction Payment would be approximately \$1.029 billion, which is calculated as the difference between \$1.211 billion (the SNR winning bid amounts) and \$1 (the winning bids from re-auction) less the resulting \$182 million overpayment of the SNR Interim Payment. As discussed above, at this time, DISH Network (through itself, a subsidiary or another entity in which it may hold a direct or indirect interest) expects to participate in any re-auction. We cannot predict with any degree of certainty the timing or outcome of any re-auction or the amount of any SNR Re-Auction Payment.

Amendment to SNR Wireless Credit Agreement. On October 1, 2015, American III, SNR Wireless and SNR HoldCo amended the First Amended and Restated Credit Agreement dated October 13, 2014, by and among American III, as Lender, SNR Wireless, as Borrower, and SNR HoldCo, as Guarantor (as amended, the “SNR Credit Agreement”), to provide, among other things, that: (i) the SNR Interim Payment and any SNR Re-Auction Payment will be made by American III directly to the FCC and will be deemed as loans under the SNR Credit Agreement; (ii) the FCC is a third-party beneficiary with respect to American III’s obligation to pay the SNR Interim Payment and any SNR Re-Auction Payment; (iii) in the event that the winning bids from re-auction or other award of the AWS-3 Licenses retained by the FCC are less than the winning bids of SNR Wireless, the purchaser, assignee or transferee of any AWS-3 Licenses from SNR Wireless is obligated to pay its pro-rata share of the difference (and SNR Wireless remains jointly and severally liable for such pro-rata share); and (iv) during the period between the due date for the payments guaranteed under the FCC SNR Guaranty (as discussed below) and the date such guaranteed payments are paid, SNR Wireless’ payment obligations to American III under the SNR Credit Agreement will be subordinated to such guaranteed payments.

DISH Network Guaranty in Favor of the FCC for Certain SNR Wireless Obligations. On October 1, 2015, DISH Network entered into a guaranty in favor of the FCC (the “FCC SNR Guaranty”) with respect to the SNR Interim Payment (which was satisfied on October 1, 2015) and any SNR Re-Auction Payment. The FCC SNR Guaranty provides, among other things, that during the period between the due date for the payments guaranteed under the FCC SNR Guaranty and the date such guaranteed payments are paid: (i) SNR Wireless’ payment obligations to American III under the SNR Credit Agreement will be subordinated to such guaranteed payments; and (ii) DISH Network or American III will withhold exercising certain rights as a creditor of SNR Wireless.

Northstar Wireless is a wholly-owned subsidiary of Northstar Spectrum. Through American II, we own an 85% non-controlling interest in Northstar Spectrum. Northstar Manager owns a 15% controlling interest in, and is the sole manager of, Northstar Spectrum. Northstar Spectrum is governed by a limited liability company agreement by and between American II and Northstar Manager (the “Northstar Spectrum LLC Agreement”). Pursuant to the Northstar Spectrum LLC Agreement, American II and Northstar Manager made pro-rata equity contributions in Northstar Spectrum. As of October 1, 2015, the total equity contributions from American II and Northstar Manager to Northstar Spectrum were approximately \$750 million and \$133 million, respectively. As of October 1, 2015, the total loans from American II to Northstar Wireless under the Northstar Credit Agreement for payments to the FCC related to the Northstar Licenses were approximately \$5.070 billion.

SNR Wireless is a wholly-owned subsidiary of SNR HoldCo. Through American III, we own an 85% non-controlling interest in SNR HoldCo. SNR Management owns a 15% controlling interest in, and is the sole manager of, SNR HoldCo. SNR HoldCo is governed by a limited liability company agreement by and between American III and SNR Management (the “SNR HoldCo LLC Agreement”). Pursuant to the SNR HoldCo LLC Agreement, American III and SNR Management made pro-rata equity contributions in SNR HoldCo. As of October 1, 2015, the total equity contributions from American III and SNR Management to SNR HoldCo were approximately \$524 million and \$93 million, respectively. As of October 1, 2015, the total loans from American III to SNR Wireless under the SNR Credit Agreement for payments to the FCC related to the SNR Licenses were approximately \$3.847 billion.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

After Northstar Wireless and SNR Wireless satisfied their respective payments to the FCC on October 1, 2015 for the Northstar Licenses and the SNR Licenses, and the Northstar Interim Payment and the SNR Interim Payment (which included an additional bid withdrawal payment), our total non-controlling debt and equity investments in the Northstar Entities and the SNR Entities for payments to the FCC related to the AWS-3 Licenses were approximately \$10.191 billion. Under the applicable accounting guidance in ASC 810, Northstar Spectrum and SNR HoldCo are considered variable interest entities and, based on the characteristics of the structure of these entities and in accordance with the applicable accounting guidance, we have consolidated these entities into our financial statements beginning in the fourth quarter 2014. See Note 2 for further information.

On October 27, 2015, the FCC granted the Northstar Licenses to Northstar Wireless and the SNR Licenses to SNR Wireless, respectively, which are recorded in “FCC authorizations” on our Consolidated Balance Sheets. The AWS-3 Licenses are subject to certain interim and final build-out requirements. By October 2021, Northstar Wireless and SNR Wireless must provide reliable signal coverage and offer service to at least 40% of the population in each area covered by an individual AWS-3 License (the “AWS-3 Interim Build-Out Requirement”). By October 2027, Northstar Wireless and SNR Wireless must provide reliable signal coverage and offer service to at least 75% of the population in each area covered by an individual AWS-3 License (the “AWS-3 Final Build-Out Requirement”). If the AWS-3 Interim Build-Out Requirement is not met, the AWS-3 License term and the AWS-3 Final Build-Out Requirement may be accelerated by two years (from October 2027 to October 2025) for each AWS-3 License area in which Northstar Wireless and SNR Wireless do not meet the requirement. If the AWS-3 Final Build-Out Requirement is not met, the authorization for each AWS-3 License area in which Northstar Wireless and SNR Wireless do not meet the requirement may terminate.

In addition, on September 23, 2016, the United States District Court for the District of Columbia unsealed a qui tam complaint that was filed by Vermont National Telephone Company (“Vermont National”) against us; our wholly-owned subsidiaries, American AWS-3 Wireless I L.L.C., American II, American III, and DISH Wireless Holding L.L.C.; Charles W. Ergen (our Chairman and Chief Executive Officer) and Cantey M. Ergen (a member of our board of directors); Northstar Wireless; Northstar Spectrum; Northstar Manager; SNR Wireless; SNR HoldCo; SNR Management; and certain other parties. See “*Contingencies – Litigation – Vermont National Telephone Company*” for further information.

We may need to make significant additional loans to the Northstar Entities and to the SNR Entities, or they may need to partner with others, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate the Northstar Licenses and the SNR Licenses, and comply with regulations applicable to the Northstar Licenses and the SNR Licenses. Depending upon the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such loans or partnerships could vary significantly. We may need to raise significant additional capital in the future, which may not be available on acceptable terms or at all, to make further investments in the Northstar Entities and the SNR Entities. There can be no assurance that we will be able to obtain a profitable return on our non-controlling investments in the Northstar Entities and the SNR Entities.

Guarantees

During the third quarter 2009, EchoStar entered into a satellite transponder service agreement for Nimiq 5 through 2024. We sublease this capacity from EchoStar and also guarantee a certain portion of EchoStar’s obligation under its satellite transponder service agreement through 2019. As of December 31, 2016, the remaining obligation of our guarantee was \$190 million.

As of December 31, 2016, we have not recorded a liability on the balance sheet for this guarantee.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Purchase Obligations

Our 2017 purchase obligations primarily consist of binding purchase orders for receiver systems and related equipment, broadband equipment, digital broadcast operations, transmission costs, engineering services, and other products and services related to the operation of our Pay-TV services and broadband service. Our purchase obligations also include certain fixed contractual commitments to purchase programming content. Our purchase obligations can fluctuate significantly from period to period due to, among other things, management's timing of payments and inventory purchases, and can materially impact our future operating asset and liability balances, and our future working capital requirements.

Programming Contracts

In the normal course of business, we enter into contracts to purchase programming content in which our payment obligations are generally contingent on the number of Pay-TV subscribers to whom we provide the respective content. These programming commitments are not included in the "Commitments" table above. The terms of our contracts typically range from one to ten years with annual rate increases. Our programming expenses will continue to increase to the extent we are successful in growing our Pay-TV subscriber base. In addition, programming costs continue to increase due to contractual price increases and the renewal of long-term programming contracts on less favorable pricing terms.

Rent Expense

Total rent expense for operating leases was \$407 million, \$477 million and \$469 million in 2016, 2015 and 2014, respectively.

Patents and Intellectual Property

Many entities, including some of our competitors, have or may in the future obtain patents and other intellectual property rights that cover or affect products or services that we offer or that we may offer in the future. We may not be aware of all intellectual property rights that our products or services may potentially infringe. Damages in patent infringement cases can be substantial, and in certain circumstances can be trebled. Further, we cannot estimate the extent to which we may be required in the future to obtain licenses with respect to patents held by others and the availability and cost of any such licenses. Various parties have asserted patent and other intellectual property rights with respect to components of our products and services. We cannot be certain that these persons do not own the rights they claim, that our products do not infringe on these rights, and/or that these rights are not valid. Further, we cannot be certain that we would be able to obtain licenses from these persons on commercially reasonable terms or, if we were unable to obtain such licenses, that we would be able to redesign our products to avoid infringement.

Contingencies

Separation Agreement

On January 1, 2008, we completed the distribution of our technology and set-top box business and certain infrastructure assets (the "Spin-off") into a separate publicly-traded company, EchoStar. In connection with the Spin-off, we entered into a separation agreement with EchoStar that provides, among other things, for the division of certain liabilities, including liabilities resulting from litigation. Under the terms of the separation agreement, EchoStar has assumed certain liabilities that relate to its business, including certain designated liabilities for acts or omissions that occurred prior to the Spin-off. Certain specific provisions govern intellectual property related claims under which, generally, EchoStar will only be liable for its acts or omissions following the Spin-off and we will indemnify EchoStar for any liabilities or damages resulting from intellectual property claims relating to the period prior to the Spin-off, as well as our acts or omissions following the Spin-off.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Litigation

We are involved in a number of legal proceedings (including those described below) concerning matters arising in connection with the conduct of our business activities. Many of these proceedings are at preliminary stages, and many of these proceedings seek an indeterminate amount of damages. We regularly evaluate the status of the legal proceedings in which we are involved to assess whether a loss is probable or there is a reasonable possibility that a loss or an additional loss may have been incurred and to determine if accruals are appropriate. If accruals are not appropriate, we further evaluate each legal proceeding to assess whether an estimate of the possible loss or range of possible loss can be made.

For certain cases described on the following pages, management is unable to provide a meaningful estimate of the possible loss or range of possible loss because, among other reasons, (i) the proceedings are in various stages; (ii) damages have not been sought; (iii) damages are unsupported and/or exaggerated; (iv) there is uncertainty as to the outcome of pending appeals or motions; (v) there are significant factual issues to be resolved; and/or (vi) there are novel legal issues or unsettled legal theories to be presented or a large number of parties (as with many patent-related cases). For these cases, however, management does not believe, based on currently available information, that the outcomes of these proceedings will have a material adverse effect on our financial condition, though the outcomes could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

California Institute of Technology

On October 1, 2013, the California Institute of Technology (“Caltech”) filed complaints against us and our wholly-owned subsidiaries DISH Network L.L.C. and dishNET Satellite Broadband L.L.C., as well as Hughes Communications, Inc. and Hughes Network Systems, LLC, which are subsidiaries of EchoStar, in the United States District Court for the Central District of California. The complaint alleged infringement of United States Patent Nos. 7,116,710; 7,421,032; 7,916,781 and 8,284,833, each of which is entitled “Serial Concatenation of Interleaved Convolutional Codes forming Turbo-Like Codes.” Caltech alleged that encoding data as specified by the DVB-S2 standard infringed each of the asserted patents. In the operative Amended Complaint, served on March 6, 2014, Caltech claimed that our Hopper[®] set-top box, as well as the Hughes defendants’ satellite broadband products and services, infringed the asserted patents by implementing the DVB-S2 standard. On May 5, 2015, the Court granted summary judgment in our favor as to the Hopper set-top box alleged in the complaint. On February 17, 2015, Caltech filed a new complaint in the United States District Court for the Central District of California, asserting the same patents against the same defendants. Caltech alleged that certain broadband equipment, including without limitation the HT1000 and HT1100 modems, gateway hardware, software and/or firmware that the Hughes defendants provide to, among others, us for our use in connection with the dishNET branded broadband service, infringed these patents. Pursuant to a settlement agreement between the parties, on May 31, 2016, Caltech dismissed with prejudice all of its claims in these actions.

ClearPlay, Inc.

On March 13, 2014, ClearPlay, Inc. (“ClearPlay”) filed a complaint against us, our wholly-owned subsidiary DISH Network L.L.C., EchoStar, and its wholly-owned subsidiary EchoStar Technologies L.L.C., in the United States District Court for the District of Utah. The complaint alleges infringement of United States Patent Nos. 6,898,799 (the “799 patent”), entitled “Multimedia Content Navigation and Playback”; 7,526,784 (the “784 patent”), entitled “Delivery of Navigation Data for Playback of Audio and Video Content”; 7,543,318 (the “318 patent”), entitled “Delivery of Navigation Data for Playback of Audio and Video Content”; 7,577,970 (the “970 patent”), entitled “Multimedia Content Navigation and Playback”; and 8,117,282 (the “282 patent”), entitled “Media Player Configured to Receive Playback Filters From Alternative Storage Mediums.” ClearPlay alleges that the AutoHop[™] feature of our Hopper set-top box infringes the asserted patents. On February 11, 2015, the case was stayed pending various third-party challenges before the United States Patent and Trademark Office regarding the validity of certain of the patents asserted in the action. In those third-party challenges, the United States Patent and Trademark Office found that all claims of the 282 patent are unpatentable, and that certain claims of the 784 patent and 318 patent are

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

unpatentable. ClearPlay appealed as to the 784 patent and the 318 patent, and on August 23, 2016, the United States Court of Appeals for the Federal Circuit affirmed the findings of the United States Patent and Trademark Office. On October 31, 2016, the stay was lifted. No trial date has been set.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

CRFD Research, Inc. (a subsidiary of Marathon Patent Group, Inc.)

On January 17, 2014, CRFD Research, Inc. (“CRFD”) filed a complaint against us, our wholly-owned subsidiaries DISH DBS Corporation and DISH Network L.L.C., EchoStar, and its wholly-owned subsidiary EchoStar Technologies L.L.C., in the United States District Court for the District of Delaware, alleging infringement of United States Patent No. 7,191,233 (the “233 patent”). The 233 patent is entitled “System for Automated, Mid-Session, User-Directed, Device-to-Device Session Transfer System,” and relates to transferring an ongoing software session from one device to another. CRFD alleges that our Hopper and Joey[®] set-top boxes infringe the 233 patent. On the same day, CRFD filed similar complaints against AT&T Inc.; Comcast Corp.; DirecTV; Time Warner Cable Inc.; Cox Communications, Inc.; Akamai Technologies, Inc.; Cablevision Systems Corp. and Limelight Networks, Inc. CRFD is an entity that seeks to license an acquired patent portfolio without itself practicing any of the claims recited therein. On January 26, 2015, we and EchoStar filed a petition before the United States Patent and Trademark Office challenging the validity of certain claims of the 233 patent. The United States Patent and Trademark Office has agreed to institute a proceeding on our petition, as well as on two third-party petitions challenging the validity of certain claims of the 233 patent, and it heard oral argument on January 16, 2016. On June 1, 2016, the United States Patent and Trademark Office found that all claims asserted against us and the EchoStar parties were unpatentable. On July 5, 2016, CRFD filed a notice of appeal to the United States Court of Appeals for the Federal Circuit. The litigation in the District Court has been stayed since June 4, 2015 pending resolution of our petition to the United States Patent and Trademark Office.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patent, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Customedia Technologies, L.L.C.

On February 10, 2016, Customedia Technologies, L.L.C. (“Customedia”) filed a complaint against us and our wholly-owned subsidiary DISH Network L.L.C. in the United States District Court for the Eastern District of Texas. The complaint alleges infringement of four patents: United States Patent No. 8,719,090 (the “090 patent”); United States Patent No. 9,053,494 (the “494 patent”); United States Patent No. 7,840,437 (the “437 patent”); and United States Patent No. 8,955,029 (the “029 patent”). Each patent is entitled “System for Data Management And On-Demand Rental And Purchase Of Digital Data Products.” Customedia appears to allege infringement in connection with our addressable advertising services, our DISH Anywhere feature, and our Pay-Per-View and video-on-demand offerings. In December 2016 and January 2017, DISH Network L.L.C. filed petitions with the United States Patent and Trademark Office challenging the validity of the asserted claims of each of the asserted patents. Customedia is an entity that seeks to license an acquired patent portfolio without itself practicing any of the claims recited therein.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Do Not Call Litigation

On March 25, 2009, our wholly-owned subsidiary DISH Network L.L.C. was sued in a civil action by the United States Attorney General and several states in the United States District Court for the Central District of Illinois (the “FTC Action”), alleging violations of the Telephone Consumer Protection Act (“TCPA”) and the Telemarketing Sales Rule (“TSR”), as well as analogous state statutes and state consumer protection laws. The plaintiffs allege that we, directly and through certain independent third-party retailers and their affiliates, committed certain telemarketing violations. On December 23, 2013, the plaintiffs filed a motion for summary judgment, which indicated for the first time that the state plaintiffs were seeking civil penalties and damages of approximately \$270 million and that the federal plaintiff was seeking an unspecified amount of civil penalties (which could substantially exceed the civil penalties and damages being sought by the state plaintiffs). The plaintiffs were also seeking injunctive relief that if granted would, among other things, enjoin DISH Network L.L.C., whether acting directly or indirectly through authorized telemarketers or independent third-party retailers, from placing any outbound telemarketing calls to market or promote its goods or services for five years, and enjoin DISH Network L.L.C. from accepting activations or sales from certain existing independent third-party retailers and from certain new independent third-party retailers, except under certain circumstances. We also filed a motion for summary judgment, seeking dismissal of all claims. On December 12, 2014, the Court issued its opinion with respect to the parties’ summary judgment motions. The Court found that DISH Network L.L.C. is entitled to partial summary judgment with respect to one claim in the action. In addition, the Court found that the plaintiffs are entitled to partial summary judgment with respect to ten claims in the action, which includes, among other things, findings by the Court establishing DISH Network L.L.C.’s liability for a substantial amount of the alleged outbound telemarketing calls by DISH Network L.L.C. and certain of its independent third-party retailers that were the subject of the plaintiffs’ motion. The Court did not issue any injunctive relief and did not make any determination on civil penalties or damages, ruling instead that the scope of any injunctive relief and the amount of any civil penalties or damages are questions for trial.

In pre-trial disclosures, the federal plaintiff indicated that it intended to seek up to \$900 million in alleged civil penalties, and the state plaintiffs indicated that they intended to seek as much as \$23.5 billion in alleged civil penalties and damages. The plaintiffs also modified their request for injunctive relief. Their requested injunction, if granted, would enjoin DISH Network L.L.C. from placing outbound telemarketing calls unless and until: (i) DISH Network L.L.C. hires a third-party consulting organization to perform a review of its call center operations; (ii) such third-party consulting organization submits a telemarketing compliance plan to the Court and the federal plaintiff; (iii) the Court holds a hearing on the adequacy of the plan; (iv) if the Court approves the plan, DISH Network L.L.C. implements the plan and verifies to the Court that it has implemented the plan; and (v) the Court issues an order permitting DISH Network L.L.C. to resume placing outbound telemarketing calls. The plaintiffs’ modified request for injunctive relief, if granted, would also enjoin DISH Network L.L.C. from accepting customer orders solicited by certain independent third-party retailers unless and until a similar third-party review and Court approval process was followed with respect to the telemarketing activities of its independent third-party retailer base to ensure compliance with the TSR.

The first phase of the bench trial took place January 19, 2016 through February 11, 2016. In closing briefs, the federal plaintiff indicated that it still is seeking \$900 million in alleged civil penalties; the California state plaintiff indicated that it is seeking \$100 million in alleged civil penalties and damages for its state law claims (in addition to any amounts sought on its federal law claims); the Ohio state plaintiff indicated that it is seeking approximately \$10 million in alleged civil penalties and damages for its state law claims (in addition to any amounts sought on its federal law claims); and the Illinois and North Carolina state plaintiffs did not state the specific alleged civil penalties and damages that they are seeking; but the state plaintiffs have taken the general position that any damages award less than \$1.0 billion (presumably for both federal and state law claims) would not raise constitutional concerns. Under the Eighth Amendment of the U.S. Constitution, excessive fines may not be imposed.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

On October 3, 2016, the plaintiffs further modified their request for injunctive relief and are now seeking, among other things, to enjoin DISH Network L.L.C., whether acting directly or indirectly through authorized telemarketers or independent third-party retailers, from placing any outbound telemarketing calls to market or promote its goods or services for five years, and enjoin DISH Network L.L.C. from accepting activations or sales from some or all existing independent third-party retailers. The second phase of the bench trial, which commenced on October 25, 2016 and concluded on November 2, 2016, covered the plaintiffs' requested injunctive relief, as well as certain evidence related to the state plaintiffs' claims.

We may also from time to time be subject to private civil litigation alleging telemarketing violations. For example, a portion of the alleged telemarketing violations by an independent third-party retailer at issue in the FTC Action are also the subject of a certified class action filed against DISH Network L.L.C. in the United States District Court for the Middle District of North Carolina (the "Krakauer Action"). Following a five-day trial, on January 19, 2017, a jury in that case found that the independent third-party retailer was acting as DISH Network L.L.C.'s agent when it made the 51,119 calls at issue in that case, and that class members are eligible to recover \$400 in damages for each call made in violation of the TCPA. The plaintiff is also seeking enhanced damages under the TCPA for alleged willful or knowing violations. The Court will decide whether there were any willful or knowing violations, and the Court has discretion to increase the damages by up to three times for any such violations. The plaintiffs in the FTC Action have asserted that the jury verdict in the Krakauer Action preclusively establishes that the independent third-party retailer at issue in the Krakauer Action was acting as DISH Network L.L.C.'s agent when it made the calls at issue in the FTC Action, and is otherwise persuasive evidence that the other independent third-party retailers at issue in the FTC Action were acting as DISH Network's L.L.C.'s agents when they made their respective calls at issue in the FTC Action, that the alleged civil penalties being sought by the federal and state plaintiffs are reasonable, and that the calls made by DISH Network L.L.C. and independent third-party retailers at issue in the FTC Action were made to landline residential phones. We have opposed those assertions.

We intend to vigorously defend these cases. We cannot predict with any degree of certainty the outcome of these suits or determine the extent of any potential liability or damages.

Dragon Intellectual Property, LLC

On December 20, 2013, Dragon Intellectual Property, LLC ("Dragon IP") filed complaints against our wholly-owned subsidiary DISH Network L.L.C., as well as Apple Inc.; AT&T, Inc.; Charter Communications, Inc.; Comcast Corp.; Cox Communications, Inc.; DirecTV; Sirius XM Radio Inc.; Time Warner Cable Inc. and Verizon Communications, Inc., in the United States District Court for the District of Delaware, alleging infringement of United States Patent No. 5,930,444 (the "444 patent"), which is entitled "Simultaneous Recording and Playback Apparatus." Dragon IP alleges that various of our DVR receivers infringe the 444 patent. Dragon IP is an entity that seeks to license an acquired patent portfolio without itself practicing any of the claims recited therein. On December 23, 2014, DISH Network L.L.C. filed a petition before the United States Patent and Trademark Office challenging the validity of certain claims of the 444 patent. On April 10, 2015, the Court granted DISH Network L.L.C.'s motion to stay the action in light of DISH Network L.L.C.'s petition and certain other defendants' petitions pending before the United States Patent and Trademark Office challenging the validity of certain claims of the 444 patent. On July 17, 2015, the United States Patent and Trademark Office agreed to institute a proceeding on our petition. Pursuant to a stipulation between the parties, on April 27, 2016, the Court entered an order of non-infringement and judgment in favor of DISH Network L.L.C. On June 15, 2016, the United States Patent and Trademark Office entered an order that the patent claims being asserted against DISH Network L.L.C. with respect to the 444 patent are unpatentable. On August 8, 2016, Dragon filed notices of appeal with respect to the Court's judgment and the United States Patent and Trademark Office's decision.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patent, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Grecia

On March 27, 2015, William Grecia (“Grecia”) filed a complaint against our wholly-owned subsidiary DISH Network L.L.C. in the United States District Court for the Northern District of Illinois, alleging infringement of United States Patent No. 8,533,860 (the “860 patent”), which is entitled “Personalized Digital Media Access System—PDMAS Part II.” Grecia alleges that we violate the 860 patent in connection with our digital rights management. Grecia is the named inventor on the 860 patent. On June 22, 2015, the case was transferred to the United States District Court for the Northern District of California. On November 18, 2015, Grecia filed an amended complaint adding allegations that we infringe U.S. Patent No. 8,402,555 (the “555 patent”), which is entitled “Personalized Digital Media Access System (PDMAS).” Grecia is the named inventor on the 555 patent. Grecia alleges that we violate the 555 patent in connection with our digital rights management. Grecia dismissed his action with prejudice on February 3, 2016.

On February 3, 2016, Grecia filed a new complaint against our wholly-owned subsidiary DISH Network L.L.C. in the United States District Court for the Northern District of California, alleging infringement of United States Patent No. 8,887,308 (the “308 patent”), which is entitled “Digital Cloud Access—PDMAS Part III,” on which Grecia is also the named inventor. Grecia alleges that we violate the 308 patent in connection with our DISH Anywhere feature. On July 29, 2016, DISH Network L.L.C. filed a petition before the United States Patent and Trademark Office challenging the validity of certain claims of the 308 patent. On January 19, 2017, the United States Patent and Trademark Office declined to institute a proceeding on our petition. The litigation in the District Court has been stayed since June 13, 2016 pending resolution of DISH Network L.L.C.’s petition to the United States Patent and Trademark Office.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patent, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

The Hopper Litigation

On May 24, 2012, our wholly-owned subsidiary, DISH Network L.L.C., filed a lawsuit in the United States District Court for the Southern District of New York against American Broadcasting Companies, Inc.; CBS Corporation; Fox Entertainment Group, Inc.; Fox Television Holdings, Inc.; Fox Cable Network Services, L.L.C. and NBCUniversal, LLC. In the lawsuit, we sought a declaratory judgment that we are not infringing any defendant’s copyright, or breaching any defendant’s retransmission consent agreement, by virtue of the PrimeTime Anytime™ and AutoHop features of our Hopper set-top box. A consumer can use the PrimeTime Anytime feature, at his or her option, to record certain primetime programs airing on ABC, CBS, Fox, and/or NBC up to every night, and to store those recordings for up to eight days. A consumer can use the AutoHop feature, at his or her option, to watch certain recordings that the subscriber made with our PrimeTime Anytime feature, commercial-free, if played back at a certain point after the show’s original airing.

Later on May 24, 2012, (i) Fox Broadcasting Company; Twentieth Century Fox Film Corp. and Fox Television Holdings, Inc. filed a lawsuit against us and DISH Network L.L.C. in the United States District Court for the Central District of California, alleging that the PrimeTime Anytime feature, the AutoHop feature, as well as Slingbox placeshifting functionality infringe their copyrights and breach their retransmission consent agreements, (ii) NBC Studios LLC; Universal Network Television, LLC; Open 4 Business Productions LLC and NBCUniversal, LLC filed a lawsuit against us and DISH Network L.L.C. in the United States District Court for the Central District of California, alleging that the PrimeTime Anytime feature and the AutoHop feature infringe their copyrights, and (iii) CBS Broadcasting Inc.; CBS Studios Inc. and Survivor Productions LLC filed a lawsuit against us and DISH Network L.L.C. in the United States District Court for the Central District of California, alleging that the PrimeTime Anytime feature and the AutoHop feature infringe their copyrights.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

As a result of certain parties' competing venue-related motions brought in both the New York and California actions, and certain networks' filing various counterclaims and amended complaints, the claims have proceeded in the following venues: (1) the copyright and contract claims regarding the ABC and CBS parties in New York; and (2) the copyright and contract claims regarding the Fox and NBC parties in California.

California Actions. The NBC plaintiffs and Fox plaintiffs filed amended complaints in their respective California actions, adding copyright claims against EchoStar and EchoStar Technologies L.L.C., a wholly-owned subsidiary of EchoStar. In addition, the Fox plaintiffs' amended complaint added claims challenging the Hopper Transfers™ feature of our second-generation Hopper set-top box.

On November 7, 2012, the California court denied the Fox plaintiffs' motion for a preliminary injunction to enjoin the Hopper set-top box's PrimeTime Anytime and AutoHop features, and the Fox plaintiffs appealed. On March 27, 2013, at the request of the parties, the Central District of California granted a stay of all proceedings in the action brought by the NBC plaintiffs, pending resolution of the appeal by the Fox plaintiffs. On July 24, 2013, the United States Court of Appeals for the Ninth Circuit affirmed the denial of the Fox plaintiffs' motion for a preliminary injunction as to the PrimeTime Anytime and AutoHop features. On August 7, 2013, the Fox plaintiffs filed a petition for rehearing and rehearing en banc, which was denied on January 24, 2014. The United States Supreme Court granted the Fox plaintiffs an extension until May 23, 2014 to file a petition for writ of certiorari, but they did not file one. As a result, the stay of the NBC plaintiffs' action expired. On August 6, 2014, at the request of the parties, the Central District of California granted a further stay of all proceedings in the action brought by the NBC plaintiffs, pending a final judgment on all claims in the Fox plaintiffs' action. Pursuant to the settlement described below, the Fox action was dismissed on February 11, 2016. On March 4, 2016, at the request of the parties, the Central District of California granted a further stay of all proceedings in the action brought by the NBC plaintiffs until September 9, 2016; provided that either party may file a motion with the Court to lift the stay after May 27, 2016. Pursuant to a settlement between us and the NBC plaintiffs, on June 16, 2016, we and the NBC plaintiffs filed a stipulation to dismiss with prejudice all of our respective claims pending in the California Court. The Court ordered such dismissal on June 20, 2016.

In addition, on February 21, 2013, the Fox plaintiffs filed a second motion for preliminary injunction against: (i) us seeking to enjoin the Hopper Transfers feature in our second-generation Hopper set-top box, alleging breach of their retransmission consent agreement; and (ii) us and EchoStar Technologies L.L.C. seeking to enjoin the Slingbox placeshifting functionality in our second-generation Hopper set-top box, alleging copyright infringement and breach of their retransmission consent agreement. On September 23, 2013, the California court denied the Fox plaintiffs' motion. The Fox plaintiffs appealed, and on July 14, 2014, the United States Court of Appeals for the Ninth Circuit affirmed the denial of the Fox plaintiffs' motion for a preliminary injunction as to the Hopper Transfers feature and the Slingbox placeshifting functionality in our second-generation Hopper set-top box.

On January 12, 2015, the Court ruled on the Fox plaintiffs' and our respective motions for summary judgment, holding that: (a) the Slingbox placeshifting functionality and the PrimeTime Anytime, AutoHop and Hopper Transfers features do not violate the copyright laws; (b) certain quality assurance copies (which were discontinued in November 2012) do violate the copyright laws; and (c) the Slingbox placeshifting functionality, the Hopper Transfers feature and such quality assurance copies breach our Fox retransmission consent agreement. At the parties' joint request, the Court had stayed the case until January 15, 2016. Pursuant to a settlement between us and the Fox plaintiffs, we, EchoStar Technologies L.L.C. and the Fox plaintiffs filed a stipulation to dismiss with prejudice all of our respective claims pending in the California Court. The Court ordered such dismissal on February 11, 2016.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

New York Actions. Both the ABC and CBS parties filed counterclaims in the New York action adding copyright claims against EchoStar Technologies L.L.C., and the CBS parties filed a counterclaim alleging that we fraudulently concealed the AutoHop feature when negotiating the renewal of our CBS retransmission consent agreement. On November 23, 2012, the ABC plaintiffs filed a motion for a preliminary injunction to enjoin the Hopper set-top box's PrimeTime Anytime and AutoHop features. On September 18, 2013, the New York court denied that motion. The ABC plaintiffs appealed, and oral argument on the appeal was heard on February 20, 2014 before the United States Court of Appeals for the Second Circuit. Pursuant to a settlement between us and the ABC parties, in March 2014, the ABC parties withdrew their appeal to the United States Court of Appeals for the Second Circuit; we and the ABC parties filed a stipulation on March 4, 2014 to dismiss without prejudice all of our respective claims pending in the United States District Court for the Southern District of New York; and the ABC parties granted a covenant not to sue. The Court ordered such dismissal on March 6, 2014. Pursuant to a settlement between us and the CBS parties, on December 10, 2014, we and the CBS parties filed a stipulation to dismiss with prejudice all of our respective claims pending in the New York Court. The Court ordered such dismissal on December 10, 2014.

These matters are now concluded.

IPA Technologies Inc.

On December 9, 2016, IPA Technologies Inc. ("IPA") filed suit against us and our wholly-owned subsidiary DISH Network L.L.C. in the United States District Court for the District of Delaware. IPA alleges that our Voice Remote with Hopper 3 infringes United States Patent Number 6,742,021 (the "021 patent"), which is entitled "Navigating Network-based Electronic Information Using Spoken Input with Multimodal Error Feedback"; United States Patent Number 6,523,061 (the "061 patent"), which is entitled "System, Method, and Article of Manufacture for Agent-Based Navigation in a Speech-Based Data Navigation System"; and United States Patent Number 6,757,718 (the "718 patent"), which is entitled "Mobile Navigation of Network-Based Electronic Information Using Spoken Input." IPA is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

LightSquared/Harbinger Capital Partners LLC (LightSquared Bankruptcy)

As previously disclosed in our public filings, L-Band Acquisition, LLC ("LBAC"), our wholly-owned subsidiary, entered into a Plan Support Agreement (the "PSA") with certain senior secured lenders to LightSquared LP (the "LightSquared LP Lenders") on July 23, 2013, which contemplated the purchase by LBAC of substantially all of the assets of LightSquared LP and certain of its subsidiaries (the "LBAC Bid") that are debtors and debtors in possession in the LightSquared bankruptcy cases pending in the United States Bankruptcy Court for the Southern District of New York (the "Bankruptcy Court"), which cases are jointly administered under the caption *In re LightSquared Inc., et. al.*, Case No. 12 12080 (SCC).

Pursuant to the PSA, LBAC was entitled to terminate the PSA in certain circumstances, certain of which required three business days written notice, including, without limitation, in the event that certain milestones specified in the PSA were not met. On January 7, 2014, LBAC delivered written notice of termination of the PSA to the LightSquared LP Lenders. As a result, the PSA terminated effective on January 10, 2014, and the LBAC Bid was withdrawn.

On August 6, 2013, Harbinger Capital Partners LLC and other affiliates of Harbinger (collectively, "Harbinger"), a shareholder of LightSquared Inc., filed an adversary proceeding against us, LBAC, EchoStar, Charles W. Ergen (our Chairman and Chief Executive Officer), SP Special Opportunities, LLC ("SPSO") (an entity controlled by Mr. Ergen), and certain other parties, in the Bankruptcy Court. Harbinger alleged, among other things, claims based on fraud, unfair competition, civil conspiracy and tortious interference with prospective economic advantage related to certain purchases of LightSquared secured debt by SPSO. Subsequently, LightSquared intervened to join in certain claims alleged against certain defendants other than us, LBAC and EchoStar.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

On October 29, 2013, the Bankruptcy Court dismissed all of the claims in Harbinger's complaint in their entirety, but granted leave for LightSquared to file its own complaint in intervention. On November 15, 2013, LightSquared filed its complaint, which included various claims against us, EchoStar, Mr. Ergen and SPSO. On December 2, 2013, Harbinger filed an amended complaint, asserting various claims against SPSO. On December 12, 2013, the Bankruptcy Court dismissed several of the claims asserted by LightSquared and Harbinger. The surviving claims included, among others, LightSquared's claims against SPSO for declaratory relief, breach of contract and statutory disallowance; LightSquared's tortious interference claim against us, EchoStar and Mr. Ergen; and Harbinger's claim against SPSO for statutory disallowance. These claims proceeded to a non-jury trial on January 9, 2014. In its Post-Trial Findings of Fact and Conclusions of Law entered on June 10, 2014, the Bankruptcy Court rejected all claims against us and EchoStar, and it rejected some but not all claims against the other defendants. On July 7, 2015, the United States District Court for the Southern District of New York denied Harbinger's motion for an interlocutory appeal of certain Bankruptcy Court orders in the adversary proceeding. On March 27, 2015, the Bankruptcy Court entered an order confirming the Modified Second Amended Joint Plan pursuant to Chapter 11 of the Bankruptcy Code and, on December 7, 2015, the Plan became effective.

We intend to vigorously defend any claims against us in this proceeding and cannot predict with any degree of certainty the outcome of this proceeding or determine the extent of any potential liability or damages.

LightSquared Transaction Shareholder Derivative Actions

On August 9, 2013, a purported shareholder of the Company, Jacksonville Police and Fire Pension Fund ("Jacksonville PFPF"), filed a putative shareholder derivative action in the District Court for Clark County, Nevada alleging, among other things, breach of fiduciary duty claims against the members of the Company's Board of Directors as of that date: Charles W. Ergen; Joseph P. Clayton; James DeFranco; Cantey M. Ergen; Steven R. Goodbarn; David K. Moskowitz; Tom A. Ortolf; and Carl E. Vogel (collectively, the "Director Defendants"). In its first amended complaint, Jacksonville PFPF asserted claims that Mr. Ergen breached his fiduciary duty to the Company in connection with certain purchases of LightSquared debt by SPSO, an entity controlled by Mr. Ergen, and that the other Director Defendants aided and abetted that alleged breach of duty. The Jacksonville PFPF claims alleged that (1) the debt purchases created an impermissible conflict of interest and (2) put at risk the LBAC Bid, which as noted above was withdrawn. Jacksonville PFPF further claimed that most members of the Company's Board of Directors are beholden to Mr. Ergen to an extent that prevents them from discharging their duties in connection with the Company's participation in the LightSquared bankruptcy auction process. Jacksonville PFPF is seeking an unspecified amount of damages. Jacksonville PFPF dismissed its claims against Mr. Goodbarn on October 8, 2013.

Jacksonville PFPF sought a preliminary injunction that would enjoin Mr. Ergen and all of the Director Defendants other than Mr. Goodbarn from influencing the Company's efforts to acquire certain assets of LightSquared in the bankruptcy proceeding. On November 27, 2013, the Court denied that request but granted narrower relief enjoining Mr. Ergen and anyone acting on his behalf from participating in negotiations related to one aspect of the LBAC Bid, which, as noted above, was withdrawn.

Five alleged shareholders filed substantially similar putative derivative complaints in state and federal courts alleging the same or substantially similar claims. On September 18, 2013, DCM Multi-Manager Fund, LLC filed a duplicative putative derivative complaint in the District Court for Clark County, Nevada, which was consolidated with the Jacksonville PFPF action on October 9, 2013. Between September 25, 2013 and October 2, 2013, City of Daytona Beach Police Officers and Firefighters Retirement System, Louisiana Municipal Police Employees' Retirement System and Iron Worker Mid-South Pension Fund filed duplicative putative derivative complaints in the United States District Court for the District of Colorado. Also on October 2, 2013, Iron Workers District Council (Philadelphia and Vicinity) Retirement and Pension Plan filed its complaint in the United States District Court for the District of Nevada.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

On October 11, 2013, Iron Worker Mid-South Pension Fund dismissed its claims without prejudice. On October 30, 2013, Louisiana Municipal Police Employees' Retirement System dismissed its claims without prejudice and, on January 2, 2014, filed a new complaint in the District Court for Clark County, Nevada, which, on May 2, 2014, was consolidated with the Jacksonville PFPF action. On December 13, 2013, City of Daytona Beach Police Officers and Firefighters Retirement System voluntarily dismissed its claims without prejudice. On March 28, 2014, Iron Workers District Council (Philadelphia and Vicinity) Retirement and Pension Plan voluntarily dismissed its claims without prejudice.

On July 25, 2014, Jacksonville PFPF filed a second amended complaint, which added claims against George R. Brokaw and Charles M. Lillis, as Director Defendants, and Thomas A. Cullen, R. Stanton Dodge and K. Jason Kiser, as officers of the Company. Jacksonville PFPF asserted five claims in its second amended complaint, each of which alleged breaches of the duty of loyalty. Three of the claims were asserted solely against Mr. Ergen; one claim was made against all of the remaining Director Defendants, other than Mr. Ergen and Mr. Clayton; and the final claim was made against Messrs. Cullen, Dodge and Kiser.

Our Board of Directors established a Special Litigation Committee to review the factual allegations and legal claims in these actions. On October 24, 2014, the Special Litigation Committee filed a report in the District Court for Clark County, Nevada regarding its investigation of the claims and allegations asserted in Jacksonville PFPF's second amended complaint. The Special Litigation Committee filed a motion to dismiss the action based, among other things, on its business judgment that it is in the best interests of the Company not to pursue the claims asserted by Jacksonville PFPF. The Director Defendants and Messrs. Cullen, Dodge and Kiser have also filed various motions to dismiss the action. In an order entered on September 18, 2015, the Court granted the Special Litigation Committee's motion to defer to the Special Litigation Committee's October 24, 2014 report, including its finding that dismissal of the action is in the best interest of the Company. The Court also held that, in light of granting the motion to defer, the pending motions to dismiss filed by the individual defendants were denied without prejudice as moot. On October 12, 2015, Jacksonville PFPF filed a notice of appeal to the Supreme Court of Nevada and the appeal is now fully briefed. We cannot predict with any degree of certainty the outcome of these suits or determine the extent of any potential liability or damages.

Qurio Holdings, Inc.

On September 26, 2014, Qurio Holdings, Inc. ("Qurio") filed a complaint against us and our wholly-owned subsidiary DISH Network L.L.C., in the United States District Court for the Northern District of Illinois, alleging infringement of United States Patent No. 8,102,863 (the "863 patent") entitled "Highspeed WAN To Wireless LAN Gateway" and United States Patent No. 7,787,904 (the "904 patent") entitled "Personal Area Network Having Media Player And Mobile Device Controlling The Same." On the same day, Qurio filed similar complaints against Comcast and DirecTV. On November 13, 2014, Qurio filed a first amended complaint, which added a claim alleging infringement of United States Patent No. 8,879,567 (the "567 patent") entitled "High-Speed WAN To Wireless LAN Gateway." Qurio is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein. On February 9, 2015, the Court granted DISH Network L.L.C.'s motion to transfer the case to the United States District Court for the Northern District of California. In October 2015, DISH Network L.L.C. filed petitions before the United States Patent and Trademark Office challenging the validity of certain claims of the 863, 904 and 567 patents. On November 3, 2015, the case was stayed pending resolution of these proceedings before the United States Patent and Trademark Office. On April 4, 2016, the United States Patent and Trademark Office agreed to institute proceedings on each of our petitions, as well as on a third-party petition challenging the validity of certain claims of the 904 patent. On June 21, 2016, pursuant to Qurio's Request for Adverse Judgment, the United States Patent and Trademark Office issued a cancellation of all claims of the 904 patent that we had challenged. On July 13, 2016, Qurio filed a Request for Adverse Judgment with the United States Patent and Trademark Office to cancel all claims of the 863 patent and 567 patent that we had challenged, leaving at issue in the District Court action only certain claims of the 567 patent that we had not challenged. On July 19, 2016, the United States Patent and Trademark Office issued a cancellation of all claims of the 863 patent and the 567 patent that we had challenged. At Qurio's request, on October 5, 2016, the parties stipulated to a voluntary dismissal of the action with prejudice, which the Court entered on that date. This matter is now concluded.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Shipping & Transit LLC

On August 30, 2016, Shipping & Transit LLC (“Shipping & Transit”) filed suit against us and our wholly-owned subsidiary, DISH Network L.L.C., in the United States District Court for the Central District of California, alleging infringement of United States Patent No. 6,317,060 (the “060 patent”), entitled “Base Station System and Method for Monitoring Travel of Mobile Vehicles and Communicating Notification Methods” and United States Patent No. 6,415,207 (the “207 patent”), entitled “System and Method for Automatically Providing Vehicle Status Information.” Shipping & Transit alleges that the “My Tech” application, which provides information to customers regarding their service technician appointments, infringes the 060 patent and the 207 patent. Shipping & Transit is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein. On January 4, 2017, Shipping & Transit dismissed the complaint without prejudice. This matter is now concluded.

Technology Development and Licensing L.L.C.

On January 22, 2009, Technology Development and Licensing L.L.C. (“TDL”) filed suit against us and EchoStar, in the United States District Court for the Northern District of Illinois, alleging infringement of United States Patent No. Re. 35,952 (the “952 patent”), which relates to certain favorite channel features. TDL is an entity that seeks to license an acquired patent portfolio without itself practicing any of the claims recited therein. The case was stayed in July 2009 pending two reexamination petitions before the United States Patent and Trademark Office, which concluded in August 2015 and resulted in 42 out of the 53 claims of the 952 patent being invalidated. Six of the surviving 11 claims are asserted against us. The case resumed in August 2015. In a separate matter in which TDL is asserting the same patent, the court in that action ruled that four claims of the ‘952 patent (which are among the six claims asserted against us) are invalid because they claim unpatentable subject matter, and TDL has stipulated that it will not appeal that order. Thus, only two claims of the ‘952 patent remain asserted against us. A trial date has not been set.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patent, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

TQ Beta LLC

On June 30, 2014, TQ Beta LLC (“TQ Beta”) filed a complaint against us; our wholly-owned subsidiaries DISH DBS Corporation and DISH Network L.L.C.; EchoStar; and EchoStar’s subsidiaries EchoStar Technologies L.L.C., Hughes Satellite Systems Corporation, and Sling Media Inc., in the United States District Court for the District of Delaware. The Complaint alleges infringement of United States Patent No. 7,203,456 (the “456 patent”), which is entitled “Method and Apparatus for Time and Space Domain Shifting of Broadcast Signals.” TQ Beta alleges that our Hopper set-top boxes, ViP 722 and ViP 722k DVR devices, as well as our DISH Anywhere™ service and DISH Anywhere mobile application, infringe the 456 patent. TQ Beta is an entity that seeks to license an acquired patent portfolio without itself practicing any of the claims recited therein. In August 2015, DISH Network L.L.C. filed petitions before the United States Patent and Trademark Office challenging the validity of certain claims of the 456 patent and in February 2016, the United States Patent and Trademark Office agreed to institute proceedings on our petitions. On February 25, 2016, the case was stayed pending resolution of these proceedings before the United States Patent and Trademark Office, and the Court vacated all pending court dates and deadlines. On January 30, 2017, the United States Patent and Trademark Office issued its final written decisions on our petitions, invalidating all claims of the 456 patent that were asserted in the litigation, which decisions may be appealed by TQ Beta.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patent, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

DISH NETWORK CORPORATION
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TQ Delta, LLC

On July 17, 2015, TQ Delta, LLC (“TQ Delta”) filed a complaint against us and our wholly-owned subsidiaries DISH DBS Corporation and DISH Network L.L.C. in the United States District Court for the District of Delaware. The Complaint alleges infringement of United States Patent No. 6,961,369 (the “369 patent”), which is entitled “System and Method for Scrambling the Phase of the Carriers in a Multicarrier Communications System”; United States Patent No. 8,718,158 (the “158 patent”), which is entitled “System and Method for Scrambling the Phase of the Carriers in a Multicarrier Communications System”; United States Patent No. 9,014,243 (the “243 patent”), which is entitled “System and Method for Scrambling Using a Bit Scrambler and a Phase Scrambler”; United States Patent No. 7,835,430 (the “430 patent”), which is entitled “Multicarrier Modulation Messaging for Frequency Domain Received Idle Channel Noise Information”; United States Patent No. 8,238,412 (the “412 patent”), which is entitled “Multicarrier Modulation Messaging for Power Level per Subchannel Information”; United States Patent No. 8,432,956 (the “956 patent”), which is entitled “Multicarrier Modulation Messaging for Power Level per Subchannel Information”; and United States Patent No. 8,611,404 (the “404 patent”), which is entitled “Multicarrier Transmission System with Low Power Sleep Mode and Rapid-On Capability.” On September 9, 2015, TQ Delta filed a first amended complaint that added allegations of infringement of United States Patent No. 9,094,268 (the “268 patent”), which is entitled “Multicarrier Transmission System With Low Power Sleep Mode and Rapid-On Capability.” On May 16, 2016, TQ Delta filed a second amended complaint that added EchoStar Corporation and its wholly-owned subsidiary EchoStar Technologies L.L.C. as defendants. TQ Delta alleges that our satellite TV service, Internet service, set-top boxes, gateways, routers, modems, adapters and networks that operate in accordance with one or more Multimedia over Coax Alliance Standards infringe the asserted patents. TQ Delta has filed actions in the same court alleging infringement of the same patents against Comcast Corp., Cox Communications, Inc., DirecTV, Time Warner Cable Inc. and Verizon Communications, Inc. TQ Delta is an entity that seeks to license an acquired patent portfolio without itself practicing any of the claims recited therein. Trial has been set for November 13, 2017. On July 14, 2016, TQ Delta stipulated to dismiss with prejudice all claims related to the 369 patent and the 956 patent. On July 20, 2016, we filed petitions with the United States Patent and Trademark Office challenging the validity of all of the patent claims of the 404 patent and the 268 patent that have been asserted against us. Third parties have filed petitions with the United States Patent and Trademark Office challenging the validity of all of the patent claims that have been asserted against us in the action. On November 4, 2016, the United States Patent and Trademark Office agreed to institute proceedings on the third-party petitions related to the 158 patent, the 243 patent, the 412 patent and the 430 patent. On December 20, 2016, pursuant to a stipulation of the parties, the Court stayed the case until the resolution of all petitions to the United States Patent and Trademark Office challenging the validity of all of the patent claims at issue. On January 19, 2017, the United States Patent and Trademark Office granted our motions to join the instituted petitions on the 430 and 158 patents. On February 9, 2017, the United States Patent and Trademark Office agreed to institute proceedings on our petition related to the 404 patent, and on February 13, 2017, the United States Patent and Trademark Office agreed to institute proceedings on our petition related to the 268 patent.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

DISH NETWORK CORPORATION
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Two-Way Media Ltd.

On February 17, 2016, Two-Way Media Ltd. (“TWM”) filed a complaint in the United States District Court for the District of Colorado against us; our subsidiaries DISH DBS Corporation, DISH Network L.L.C., DISH Network Service L.L.C., Sling TV Holding L.L.C., Sling TV L.L.C., and Sling TV Purchasing L.L.C.; and EchoStar Corporation, EchoStar Technologies L.L.C., EchoStar Satellite Services L.L.C. and Sling Media, Inc. The complaint alleges infringement of United States Patent Nos. 5,778,187, 5,983,005, 6,434,622 and 7,266,686, each entitled “Multicasting Method and Apparatus,” and United States Patent No. 9,124,607, entitled “Methods and Systems for Playing Media.” TWM claims infringement by our Sling TV domestic and international services, Slingboxes and DISH DVRs incorporating Slingbox technology, and the DISH Anywhere application and website. TWM is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein. Pursuant to a settlement between the parties, the case was dismissed with prejudice on December 15, 2016. This matter is now concluded.

Vermont National Telephone Company

On September 23, 2016, the United States District Court for the District of Columbia unsealed a qui tam complaint that was filed by Vermont National against us; our wholly-owned subsidiaries, American AWS-3 Wireless I L.L.C., American II, American III, and DISH Wireless Holding L.L.C.; Charles W. Ergen (our Chairman and Chief Executive Officer) and Cantey M. Ergen (a member of our board of directors); Northstar Wireless; Northstar Spectrum; Northstar Manager; SNR Wireless; SNR HoldCo; SNR Management; and certain other parties. The complaint was unsealed after the United States Department of Justice notified the Court that it had declined to intervene in the action. The complaint is a civil action that was filed under seal on May 13, 2015 by Vermont National, which participated in the AWS-3 Auction through its wholly-owned subsidiary, VTel Wireless. The complaint alleges violations of the federal civil False Claims Act (the “FCA”) based on, among other things, allegations that Northstar Wireless and SNR Wireless falsely claimed bidding credits of 25% in the AWS-3 Auction when they were allegedly under the de facto control of DISH Network and, therefore, were not entitled to the bidding credits as designated entities under applicable FCC rules. Vermont National seeks to recover on behalf of the United States government approximately \$10 billion, which reflects the \$3.3 billion in bidding credits that Northstar Wireless and SNR Wireless claimed in the AWS-3 Auction, trebled under the FCA. Vermont National also seeks civil penalties of not less than \$5,500 and not more than \$11,000 for each violation of the FCA.

We intend to vigorously defend this case. We cannot predict with any degree of certainty the outcome of this proceeding or determine the extent of any potential liability or damages.

Waste Disposal Inquiry

The California Attorney General and the Alameda County (California) District Attorney are investigating whether certain of our waste disposal policies, procedures and practices are in violation of the California Business and Professions Code and the California Health and Safety Code. We expect that these entities will seek injunctive and monetary relief. The investigation appears to be part of a broader effort to investigate waste handling and disposal processes of a number of industries. While we are unable to predict the outcome of this investigation, we do not believe that the outcome will have a material effect on our results of operations, financial condition or cash flows.

Other

In addition to the above actions, we are subject to various other legal proceedings and claims that arise in the ordinary course of business, including, among other things, disputes with programmers regarding fees. In our opinion, the amount of ultimate liability with respect to any of these actions is unlikely to materially affect our financial condition, results of operations or liquidity, though the outcomes could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

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15. Segment Reporting

Operating segments are components of an enterprise for which separate financial information is available and regularly evaluated by the chief operating decision maker(s) of an enterprise. Operating income is the primary measure used by our chief operating decision maker to evaluate segment operating performance. We currently operate two primary business segments: (1) Pay-TV and Broadband and (2) Wireless. See Note 1 for further information.

All other and eliminations primarily include intersegment eliminations related to intercompany debt and the related interest income and interest expense, which are eliminated in consolidation.

The total assets, revenue and operating income by segment were as follows:

	As of December 31,			
	2016		2015	
	(In thousands)			
Total assets:				
Pay-TV and Broadband	\$	27,157,831	\$	22,392,447
Wireless		17,814,382		16,300,465
Eliminations		(16,880,366)		(15,806,202)
Total assets	\$	28,091,847	\$	22,886,710

	Pay-TV and Broadband	Wireless	All Other & Eliminations	Consolidated Total
	(In thousands)			
Year Ended December 31, 2016				
Total revenue	\$ 15,094,562	\$ —	\$ —	\$ 15,094,562
Depreciation and amortization	909,286	43,860	—	953,146
Operating income (loss)	2,275,236	(64,127)	—	2,211,109
Interest income	1,006,239	3,745	(978,820)	31,164
Interest expense, net of amounts capitalized	(876,226)	(155,586)	978,820	(52,992)
Other, net	30,734	86,448	—	117,182
Income tax (provision) benefit, net	(905,215)	68,206	—	(837,009)
Income (loss)	1,530,768	(61,314)	—	1,469,454
Year Ended December 31, 2015				
Total revenue	\$ 15,068,505	\$ 396	\$ —	\$ 15,068,901
Depreciation and amortization	955,749	44,299	—	1,000,048
Operating income (loss)	2,037,971	(705,575)	—	1,332,396
Interest income	859,605	9,434	(849,516)	19,523
Interest expense, net of amounts capitalized	(844,249)	(499,277)	849,516	(494,010)
Other, net	82,160	195,883	—	278,043
Income tax (provision) benefit, net	(759,148)	392,472	—	(366,676)
Income (loss)	1,376,339	(607,063)	—	769,276
Year Ended December 31, 2014				
Total revenue	\$ 14,643,049	\$ 410	\$ (72)	\$ 14,643,387
Depreciation and amortization	1,006,082	71,854	—	1,077,936
Operating income (loss)	1,922,363	(97,912)	—	1,824,451
Interest income	376,422	15,384	(329,965)	61,841
Interest expense, net of amounts capitalized	(821,766)	(119,408)	329,965	(611,209)
Other, net	(9,414)	(59,927)	—	(69,341)
Income tax (provision) benefit, net	(436,753)	159,913	—	(276,840)
Income (loss)	1,030,852	(101,950)	—	928,902

Geographic Information. Revenues are attributed to geographic regions based upon the location where the products are delivered and services are provided. All revenue was derived from the United States.

DISH NETWORK CORPORATION
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16. Valuation and Qualifying Accounts

Our valuation and qualifying accounts as of December 31, 2016, 2015 and 2014 were as follows:

<u>Allowance for doubtful accounts</u>	<u>Balance at Beginning of Year</u>	<u>Charged to Costs and Expenses</u>	<u>Deductions</u>	<u>Balance at End of Year</u>
	(In thousands)			
For the years ended:				
December 31, 2016	\$ 22,167	\$ 153,796	\$ (158,008)	\$ 17,955
December 31, 2015	\$ 23,603	\$ 104,926	\$ (106,362)	\$ 22,167
December 31, 2014	\$ 15,981	\$ 156,318	\$ (148,696)	\$ 23,603

17. Quarterly Financial Data (Unaudited)

Our quarterly results of operations are summarized as follows:

	<u>For the Three Months Ended</u>			
	<u>March 31</u>	<u>June 30</u>	<u>September 30</u>	<u>December 31 (1)</u>
	(In thousands, except per share data)			
Year ended December 31, 2016:				
Total revenue	\$ 3,787,235	\$ 3,837,036	\$ 3,746,111	\$ 3,724,180
Operating income (loss)	560,142	613,825	496,320	540,822
Net income (loss)	394,960	418,306	312,207	343,981
Net income (loss) attributable to DISH Network	389,290	410,464	307,426	342,673
Basic net income (loss) per share attributable to DISH Network	\$ 0.84	\$ 0.88	\$ 0.66	\$ 0.74
Diluted net income (loss) per share attributable to DISH Network	\$ 0.84	\$ 0.88	\$ 0.64	\$ 0.70
Year ended December 31, 2015:				
Total revenue	\$ 3,724,228	\$ 3,832,425	\$ 3,733,565	\$ 3,778,683
Operating income (loss)	483,863	533,987	441,720	(127,174)
Net income (loss)	353,252	332,326	202,610	(118,912)
Net income (loss) attributable to DISH Network	351,485	324,423	196,479	(125,295)
Basic net income (loss) per share attributable to DISH Network	\$ 0.76	\$ 0.70	\$ 0.42	\$ (0.27)
Diluted net income (loss) per share attributable to DISH Network	\$ 0.76	\$ 0.70	\$ 0.42	\$ (0.27)

(1) The fourth quarter 2015 was negatively impacted by the “FCC auction expense” of \$516 million and an impairment charge for the D1 satellite and related ground equipment of \$123 million.

18. Related Party Transactions

Related Party Transactions with EchoStar

Following the Spin-off, we and EchoStar have operated as separate publicly-traded companies, and, except for the Satellite and Tracking Stock Transaction and Sling TV Holding described below, neither entity has any ownership interest in the other. However, a substantial majority of the voting power of the shares of both companies is owned beneficially by Charles W. Ergen, our Chairman and Chief Executive Officer, and by certain trusts established by Mr. Ergen for the benefit of his family.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

EchoStar is our primary supplier of set-top boxes and digital broadcast operations and a supplier of the vast majority of our transponder capacity. Generally, the amounts we pay EchoStar for products and services are based on pricing equal to EchoStar's cost plus a fixed margin (unless noted differently below), which will vary depending on the nature of the products and services provided.

In connection with and following the Spin-off, we and EchoStar have entered into certain agreements pursuant to which we obtain certain products, services and rights from EchoStar, EchoStar obtains certain products, services and rights from us, and we and EchoStar have indemnified each other against certain liabilities arising from our respective businesses. We also may enter into additional agreements with EchoStar in the future. The following is a summary of the terms of our principal agreements with EchoStar that may have an impact on our financial condition and results of operations.

Recent Developments

On January 31, 2017, we and our indirect wholly-owned subsidiaries DNLLC and DOLLC, entered into a Share Exchange Agreement (the "Share Exchange Agreement") with EchoStar, EchoStar Broadcasting Holding Parent L.L.C., an indirect wholly-owned subsidiary of EchoStar ("EB Holdco"), EchoStar Broadcasting Holding Corporation, a direct, wholly-owned subsidiary of EB Holdco ("EB Splitco"), EchoStar Technologies Holding Corporation, a direct wholly-owned subsidiary of EchoStar ("ET Splitco"), and EchoStar Technologies L.L.C., a direct wholly-owned subsidiary of EchoStar ("ETLLC"). Pursuant to the Share Exchange Agreement, among other things: (i) EchoStar will complete the steps necessary for certain assets and liabilities of the EchoStar technologies and EchoStar broadcasting businesses, consisting primarily of the businesses that design, develop and distribute digital set-top boxes, provide satellite uplinking services and develop and support streaming video technology, as well as certain investments in joint ventures, spectrum licenses, real estate properties and EchoStar's ten percent non-voting interest Sling TV Holding (the "Transferred Businesses"), to be transferred to EB Splitco and ET Splitco; and (ii) EchoStar will transfer to us 100% of the equity of EB Splitco and ET Splitco, and in exchange, we will transfer the EchoStar Tracking Stock to EchoStar and the HSSC Tracking Stock to HSSC ((i) and (ii) collectively, the "Transaction"). The Transaction has been structured in a manner to be a tax-free exchange for each of us and EchoStar.

The Share Exchange Agreement contains customary representations and warranties, covenants and indemnification provisions. The closing of the Transaction is subject to various conditions. The Transaction is expected to be consummated three business days after the satisfaction or waiver of all of the closing conditions to the Transaction (other than conditions that by their nature are to be satisfied at the closing, but subject, among other things, to the satisfaction or waiver of those conditions at such time), but no earlier than February 28, 2017. The Share Exchange Agreement provides for customary termination rights, including the right of either party to terminate the Share Exchange Agreement if the Transaction has not closed by March 31, 2017. In connection with the Share Exchange Agreement, we and EchoStar and certain of their subsidiaries will, at the closing, enter into certain customary agreements covering, among other things, tax matters, employee matters, intellectual property matters and the provision of transitional services. If the Transaction closes, we expect that certain of the agreements with EchoStar described below will terminate, and we will enter into certain new agreements with EchoStar.

The financial results related to the Share Exchange Agreement are not included in our consolidated financial statements for all periods presented as the closing of the Transaction is subject to various conditions and is not expected to close prior to February 28, 2017.

DISH NETWORK CORPORATION
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“Trade accounts receivable”

As of December 31, 2016 and 2015, trade accounts receivable from EchoStar was \$5 million and \$23 million, respectively. These amounts are recorded in “Trade accounts receivable” on our Consolidated Balance Sheets.

“Trade accounts payable”

As of December 31, 2016 and 2015, trade accounts payable to EchoStar was \$277 million and \$281 million, respectively. These amounts are recorded in “Trade accounts payable” on our Consolidated Balance Sheets.

“Equipment sales and other revenue”

During the years ended December 31, 2016, 2015 and 2014, we received \$1 million, \$46 million and \$62 million, respectively, for equipment sales and other revenue from EchoStar. These amounts are recorded in “Equipment sales and other revenue” on our Consolidated Statements of Operations and Comprehensive Income (Loss). The agreements pertaining to these revenues are discussed below.

Remanufactured Receiver and Services Agreement. We entered into a remanufactured receiver and services agreement with EchoStar pursuant to which EchoStar has the right, but not the obligation, to purchase remanufactured receivers and accessories from us at cost plus a fixed margin, which varies depending on the nature of the equipment purchased. In November 2016, we and EchoStar extended this agreement until December 31, 2017. EchoStar may terminate the remanufactured receiver and services agreement for any reason upon at least 60 days notice to us. We may also terminate this agreement if certain entities acquire us.

Satellite Capacity Leased to EchoStar. Since the Spin-off, we have entered into certain satellite capacity agreements pursuant to which EchoStar leases certain capacity on certain satellites owned by us. The fees for the services provided under these satellite capacity agreements depend, among other things, upon the orbital location of the applicable satellite, the number of transponders that are leased on the applicable satellite and the length of the lease. The term of each lease is set forth below:

EchoStar XV. In May 2013, we began leasing satellite capacity to EchoStar on EchoStar XV and relocated the satellite for testing at EchoStar’s Brazilian authorization at the 45 degree orbital location. Effective March 1, 2014, this lease converted to a month-to-month lease. Both parties have the right to terminate this lease with 30 days notice. This lease terminated in November 2015 and EchoStar relocated this satellite from the 45 degree orbital location back to the 61.5 degree orbital location where it currently serves as an in-orbit spare.

Real Estate Lease Agreements. Since the Spin-off, we have entered into lease agreements pursuant to which we lease certain real estate to EchoStar. The rent on a per square foot basis for each of the leases is comparable to per square foot rental rates of similar commercial property in the same geographic areas, and EchoStar is responsible for its portion of the taxes, insurance, utilities and maintenance of the premises. The term of each lease is set forth below:

El Paso Lease Agreement. During 2012, we began leasing certain space at 1285 Joe Battle Blvd., El Paso, Texas to EchoStar for an initial period ending on August 1, 2015, which also provides EchoStar with renewal options for four consecutive three-year terms. During the second quarter 2015, EchoStar exercised its first renewal option for a period ending on August 1, 2018.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

“Subscriber-related expenses”

During the years ended December 31, 2016, 2015 and 2014, we incurred \$102 million, \$98 million and \$80 million, respectively, for subscriber-related expenses from EchoStar. These amounts are recorded in “Subscriber-related expenses” on our Consolidated Statements of Operations and Comprehensive Income (Loss). The agreements pertaining to these expenses are discussed below.

Hughes Broadband Distribution Agreement. Effective October 1, 2012, dishNET Satellite Broadband L.L.C. (“dishNET Satellite Broadband”), our indirect wholly-owned subsidiary, and HNS entered into a Distribution Agreement (the “Distribution Agreement”) pursuant to which dishNET Satellite Broadband has the right, but not the obligation, to market, sell and distribute the HNS satellite Internet service (the “Service”). dishNET Satellite Broadband pays HNS a monthly per subscriber wholesale service fee for the Service based upon the subscriber’s service level, and, beginning January 1, 2014, certain volume subscription thresholds. The Distribution Agreement also provides that dishNET Satellite Broadband has the right, but not the obligation, to purchase certain broadband equipment from HNS to support the sale of the Service. As part of the Satellite and Tracking Stock Transaction, on February 20, 2014, dishNET Satellite Broadband and HNS amended the Distribution Agreement which, among other things, extended the initial term of the Distribution Agreement through March 1, 2024. Thereafter, the Distribution Agreement automatically renews for successive one year terms unless either party gives written notice of its intent not to renew to the other party at least 180 days before the expiration of the then-current term. Upon expiration or termination of the Distribution Agreement, the parties will continue to provide the Service to the then-current dishNET subscribers pursuant to the terms and conditions of the Distribution Agreement.

For the years ended December 31, 2016, 2015 and 2014, we purchased broadband equipment from HNS of \$9 million, \$11 million and \$24 million, respectively. These amounts are initially included in “Inventory” and are subsequently capitalized as “Property and equipment, net” on our Consolidated Balance Sheets or expensed as “Subscriber acquisition costs” or “Subscriber-related expenses” on our Consolidated Statements of Operations and Comprehensive Income (Loss) when the equipment is deployed. We also purchase certain broadband equipment from EchoStar under the 2012 Receiver Agreement, discussed below.

SlingService Services Agreement. Effective February 23, 2010, we entered into an agreement with EchoStar pursuant to which we receive certain services related to placeshifting, which is used for, among other things, the DISH Anywhere mobile application. The fees for the services provided under this services agreement depend, among other things, upon the cost to develop and operate such services. This agreement had an initial term of five years with automatic renewal for successive one year terms. This agreement will renew on February 23, 2017 for an additional one-year period until February 23, 2018. This agreement may be terminated for any reason upon at least 120 days notice to EchoStar.

DISH Remote Access Services Agreement. Effective February 23, 2010, we entered into an agreement with EchoStar pursuant to which we receive, among other things, certain remote DVR management services. The fees for the services provided under this services agreement depend, among other things, upon the cost to develop and operate such services. This agreement had an initial term of five years with automatic renewal for successive one year terms. This agreement will renew on February 23, 2017 for an additional one-year period until February 23, 2018. This agreement may be terminated for any reason upon at least 120 days notice to EchoStar.

“Satellite and transmission expenses”

During the years ended December 31, 2016, 2015 and 2014, we incurred \$689 million, \$723 million and \$653 million, respectively, for satellite and transmission expenses from EchoStar. These amounts are recorded in “Satellite and transmission expenses” on our Consolidated Statements of Operations and Comprehensive Income (Loss). The agreements pertaining to these expenses are discussed below.

DISH NETWORK CORPORATION
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Broadcast Agreement. Effective January 1, 2012, we and EchoStar entered into a broadcast agreement (the “2012 Broadcast Agreement”) pursuant to which EchoStar provides broadcast services to us, including teleport services such as transmission and downlinking, channel origination services, and channel management services, for the period from January 1, 2012 to December 31, 2016. In November 2016, we and EchoStar amended the 2012 Broadcast Agreement to extend the term thereof for one additional year until December 31, 2017. The fees for services provided under the 2012 Broadcast Agreement are calculated at either: (a) EchoStar’s cost of providing the relevant service plus a fixed dollar fee, which is subject to certain adjustments; or (b) EchoStar’s cost of providing the relevant service plus a fixed margin, which will depend on the nature of the services provided. We have the ability to terminate channel origination services and channel management services for any reason and without any liability upon at least 60 days notice to EchoStar. If we terminate the teleport services provided under the 2012 Broadcast Agreement for a reason other than EchoStar’s breach, we are generally obligated to reimburse EchoStar for any direct costs EchoStar incurs related to any such termination that it cannot reasonably mitigate.

Broadcast Agreement for Certain Sports-Related Programming. In May 2010, we and EchoStar entered into a broadcast agreement pursuant to which EchoStar provides certain broadcast services to us in connection with our carriage of certain sports-related programming. The term of this agreement is for ten years. If we terminate this agreement for a reason other than EchoStar’s breach, we are generally obligated to reimburse EchoStar for any direct costs EchoStar incurs related to any such termination that it cannot reasonably mitigate. The fees for the broadcast services provided under this agreement depend, among other things, upon the cost to develop and provide such services.

Satellite Capacity Leased from EchoStar. Since the Spin-off, we have entered into certain satellite capacity agreements pursuant to which we lease certain capacity on certain satellites owned or leased by EchoStar. The fees for the services provided under these satellite capacity agreements depend, among other things, upon the orbital location of the applicable satellite, the number of transponders that are leased on the applicable satellite and the length of the lease. See “Pay-TV Satellites” in Note 8 for further information. The term of each lease is set forth below:

- *EchoStar I, VII, X, XI and XIV.* On March 1, 2014, we began leasing all available capacity from EchoStar on the EchoStar I, VII, X, XI and XIV satellites. The term of each satellite capacity agreement generally terminates upon the earlier of: (i) the end-of-life of the satellite; (ii) the date the satellite fails; or (iii) a certain date, which depends upon, among other things, the estimated useful life of the satellite. We generally have the option to renew each satellite capacity agreement on a year-to-year basis through the end of the respective satellite’s life. There can be no assurance that any options to renew such agreements will be exercised. The satellite capacity agreement for EchoStar I expired on November 30, 2015.
- *EchoStar VIII.* In May 2013, we began leasing capacity from EchoStar on EchoStar VIII as an in-orbit spare. Effective March 1, 2014, this lease converted to a month-to-month lease. Both parties have the right to terminate this lease with 30 days notice. This lease terminated in November 2015.
- *EchoStar IX.* We lease certain satellite capacity from EchoStar on EchoStar IX. Subject to availability, we generally have the right to continue to lease satellite capacity from EchoStar on EchoStar IX on a month-to-month basis.
- *EchoStar XII.* The lease for EchoStar XII generally terminates upon the earlier of: (i) the end-of-life or replacement of the satellite (unless we determine to renew on a year-to-year basis); (ii) the date the satellite fails; (iii) the date the transponders on which service is being provided fails; or (iv) a certain date, which depends upon, among other things, the estimated useful life of the satellite, whether the replacement satellite fails at launch or in orbit prior to being placed into service and the exercise of certain renewal options. We generally have the option to renew the lease on a year-to-year basis through the end of the satellite’s life. There can be no assurance that any options to renew this agreement will be exercised.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

- *EchoStar XVI.* In December 2009, we entered into a transponder service agreement with EchoStar to lease all of the capacity on EchoStar XVI, a DBS satellite, after its service commencement date. EchoStar XVI was launched in November 2012 to replace EchoStar XV at the 61.5 degree orbital location and is currently in service. Effective December 21, 2012, we and EchoStar amended the transponder service agreement to, among other things, change the initial term to generally expire upon the earlier of: (i) the end-of-life or replacement of the satellite; (ii) the date the satellite fails; (iii) the date the transponder(s) on which service is being provided under the agreement fails; or (iv) four years following the actual service commencement date. In July 2016, we and EchoStar amended the transponder service agreement to, among other things, extend the initial term by one additional year and to reduce the term of the first renewal option by one year. Prior to expiration of the initial term, we have the option to renew for an additional five-year period. Prior to expiration of the initial term, EchoStar also has the right, upon certain conditions, to renew for an additional five-year period. If either we or EchoStar exercise our respective five-year renewal options, then we have the option to renew for an additional five-year period prior to expiration of the then-current term. There can be no assurance that any options to renew this agreement will be exercised.

Nimiq 5 Agreement. During 2009, EchoStar entered into a fifteen-year satellite service agreement with Telesat Canada (“Telesat”) to receive service on all 32 DBS transponders on the Nimiq 5 satellite at the 72.7 degree orbital location (the “Telesat Transponder Agreement”). During 2009, EchoStar also entered into a satellite service agreement (the “DISH Nimiq 5 Agreement”) with us, pursuant to which we currently receive service from EchoStar on all 32 of the DBS transponders covered by the Telesat Transponder Agreement. We have also guaranteed certain obligations of EchoStar under the Telesat Transponder Agreement. See discussion under “Guarantees” in Note 14.

Under the terms of the DISH Nimiq 5 Agreement, we make certain monthly payments to EchoStar that commenced in September 2009 when the Nimiq 5 satellite was placed into service and continue through the service term. Unless earlier terminated under the terms and conditions of the DISH Nimiq 5 Agreement, the service term will expire ten years following the date the Nimiq 5 satellite was placed into service. Upon expiration of the initial term, we have the option to renew the DISH Nimiq 5 Agreement on a year-to-year basis through the end-of-life of the Nimiq 5 satellite. Upon in-orbit failure or end-of-life of the Nimiq 5 satellite, and in certain other circumstances, we have certain rights to receive service from EchoStar on a replacement satellite. There can be no assurance that any options to renew the DISH Nimiq 5 Agreement will be exercised or that we will exercise our option to receive service on a replacement satellite.

QuetzSat-1 Lease Agreement. During 2008, EchoStar entered into a ten-year satellite service agreement with SES Latin America S.A. (“SES”), which provides, among other things, for the provision by SES to EchoStar of service on 32 DBS transponders on the QuetzSat-1 satellite. During 2008, EchoStar also entered into a transponder service agreement (“QuetzSat-1 Transponder Agreement”) with us pursuant to which we receive service from EchoStar on 24 DBS transponders. QuetzSat-1 was launched on September 29, 2011 and was placed into service during the fourth quarter 2011 at the 67.1 degree orbital location while we and EchoStar explored alternative uses for the QuetzSat-1 satellite. In the interim, EchoStar provided us with alternate capacity at the 77 degree orbital location. During the first quarter 2013, we and EchoStar entered into an agreement pursuant to which we sublease five DBS transponders back to EchoStar. In January 2013, QuetzSat-1 was moved to the 77 degree orbital location and we commenced commercial operations at that location in February 2013.

Unless earlier terminated under the terms and conditions of the QuetzSat-1 Transponder Agreement, the initial service term will expire in November 2021. Upon expiration of the initial term, we have the option to renew the QuetzSat-1 Transponder Agreement on a year-to-year basis through the end-of-life of the QuetzSat-1 satellite. Upon an in-orbit failure or end-of-life of the QuetzSat-1 satellite, and in certain other circumstances, we have certain rights to receive service from EchoStar on a replacement satellite. There can be no assurance that any options to renew the QuetzSat-1 Transponder Agreement will be exercised or that we will exercise our option to receive service on a replacement satellite.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

103 Degree Orbital Location/SES-3. In May 2012, EchoStar entered into a spectrum development agreement (the “103 Spectrum Development Agreement”) with Ciel Satellite Holdings Inc. (“Ciel”) to develop certain spectrum rights at the 103 degree orbital location (the “103 Spectrum Rights”). In June 2013, we and EchoStar entered into a spectrum development agreement (the “DISH 103 Spectrum Development Agreement”) pursuant to which we may use and develop the 103 Spectrum Rights. Unless earlier terminated under the terms and conditions of the DISH 103 Spectrum Development Agreement, the term generally will continue for the duration of the 103 Spectrum Rights.

In connection with the 103 Spectrum Development Agreement, in May 2012, EchoStar also entered into a ten-year service agreement with Ciel pursuant to which EchoStar leases certain satellite capacity from Ciel on the SES-3 satellite at the 103 degree orbital location (the “103 Service Agreement”). In June 2013, we and EchoStar entered into an agreement pursuant to which we lease certain satellite capacity from EchoStar on the SES-3 satellite (the “DISH 103 Service Agreement”). Under the terms of the DISH 103 Service Agreement, we make certain monthly payments to EchoStar through the service term. Unless earlier terminated under the terms and conditions of the DISH 103 Service Agreement, the initial service term will expire on the earlier of: (i) the date the SES-3 satellite fails; (ii) the date the transponder(s) on which service was being provided under the agreement fails; or (iii) ten years following the actual service commencement date. Upon in-orbit failure or end of life of the SES-3 satellite, and in certain other circumstances, we have certain rights to receive service from EchoStar on a replacement satellite. There can be no assurance that we will exercise our option to receive service on a replacement satellite.

TT&C Agreement. Effective January 1, 2012, we entered into a telemetry, tracking and control (“TT&C”) agreement pursuant to which we receive TT&C services from EchoStar for certain satellites for a period ending on December 31, 2016 (the “2012 TT&C Agreement”). In November 2016, we and EchoStar amended the 2012 TT&C Agreement to extend the term thereof for one additional year until December 31, 2017. The fees for services provided under the 2012 TT&C Agreement are calculated at either: (i) a fixed fee; or (ii) cost plus a fixed margin, which will vary depending on the nature of the services provided. We are able to terminate the 2012 TT&C Agreement for any reason upon 60 days notice.

DBSD North America Agreement. On March 9, 2012, we completed the DBSD Transaction. During the second quarter 2011, EchoStar acquired Hughes. Prior to our acquisition of DBSD North America and EchoStar’s acquisition of Hughes, DBSD North America and HNS entered into an agreement pursuant to which HNS provides, among other things, hosting, operations and maintenance services for DBSD North America’s satellite gateway and associated ground infrastructure. This agreement generally may be terminated by us at any time for convenience.

TerreStar Agreement. On March 9, 2012, we completed the TerreStar Transaction. Prior to our acquisition of substantially all the assets of TerreStar and EchoStar’s acquisition of Hughes, TerreStar and HNS entered into various agreements pursuant to which HNS provides, among other things, hosting, operations and maintenance services for TerreStar’s satellite gateway and associated ground infrastructure. These agreements generally may be terminated by us at any time for convenience.

DISHOnline.com Services Agreement. Effective January 1, 2010, we entered into a two-year agreement with EchoStar pursuant to which we receive certain services associated with an online video portal. The fees for the services provided under this services agreement depend, among other things, upon the cost to develop and operate such services. We have the option to renew this agreement for successive one year terms and the agreement may be terminated for any reason upon at least 120 days notice to EchoStar. In November 2015, we exercised our right to renew this agreement for a one-year period ending on December 31, 2016. In December 2016, we and EchoStar amended this agreement to, among other things, extend the term thereof for one additional year until December 31, 2017.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Sling TV Holding. Effective July 1, 2012, we and EchoStar formed Sling TV Holding, which was owned two-thirds by us and one-third by EchoStar and was consolidated into our financial statements beginning July 1, 2012. Sling TV Holding was formed to develop and commercialize certain advanced technologies. At that time, we, EchoStar and Sling TV Holding entered into the following agreements with respect to Sling TV Holding: (i) a contribution agreement pursuant to which we and EchoStar contributed certain assets in exchange for our respective ownership interests in Sling TV Holding; (ii) a limited liability company operating agreement (the “Operating Agreement”), which provides for the governance of Sling TV Holding; and (iii) a commercial agreement (the “Commercial Agreement”) pursuant to which, among other things, Sling TV Holding has: (a) certain rights and corresponding obligations with respect to its business; and (b) the right, but not the obligation, to receive certain services from us and EchoStar, respectively. Since this was a formation of an entity under common control and a step-up in basis was not allowed, each party’s contributions were recorded at historical book value for accounting purposes.

Effective August 1, 2014, EchoStar and Sling TV Holding entered into the Exchange Agreement pursuant to which, among other things, Sling TV Holding distributed certain assets to EchoStar and EchoStar reduced its interest in Sling TV Holding to a ten percent non-voting interest. We now have a ninety percent equity interest and a 100% voting interest in Sling TV Holding. In addition, we, EchoStar and Sling TV Holding amended and restated the Operating Agreement, primarily to reflect the changes implemented by the Exchange Agreement. Finally, we, EchoStar and Sling TV Holding amended and restated the Commercial Agreement, pursuant to which, among other things, Sling TV Holding: (1) continues to have certain rights and corresponding obligations with respect to its business; (2) continues to have the right, but not the obligation, to receive certain services from us and EchoStar; and (3) has a license from EchoStar to use certain of the assets distributed to EchoStar as part of the Exchange Agreement. Sling TV Holding operates, through its subsidiary Sling TV L.L.C., the Sling TV services.

Since the Exchange Agreement is among entities under common control, we recorded the difference between the historical cost basis of the assets transferred to EchoStar and our historical cost basis in EchoStar’s one-third noncontrolling interest in Sling TV Holding as a \$6 million, net of deferred taxes, capital distribution in “Additional paid-in capital” on our Consolidated Balance Sheets. In addition, we recorded the initial fair value of EchoStar’s ten percent non-voting interest as a \$14 million, net of deferred taxes, deemed distribution in “Additional paid-in capital” on our Consolidated Balance Sheets.

EchoStar’s ten percent non-voting interest is redeemable contingent on a certain performance goal being achieved by Sling TV Holding. In addition, subject to certain conditions, the interest is redeemable at fair value within sixty days following the fifth anniversary of the Exchange Agreement. This interest is considered temporary equity and is recorded as “Redeemable noncontrolling interests” in the mezzanine section of our Consolidated Balance Sheets. EchoStar’s redeemable noncontrolling interest in Sling TV Holding was initially accounted for at fair value. The performance goal has been determined to be probable of achievement. Accordingly, the value of EchoStar’s redeemable noncontrolling interest in Sling TV Holding is adjusted each reporting period for any change in redemption value above the initial fair value (adjusted for the operating results of Sling TV Holding attributable to EchoStar subsequent to August 1, 2014), with the offset recorded in “Additional paid-in capital,” net of deferred taxes, on our Consolidated Balance Sheets. Subsequent to the Exchange Agreement, the operating results of Sling TV Holding attributable to EchoStar are recorded as “Redeemable noncontrolling interests” on our Consolidated Balance Sheets, with the offset recorded in “Net income (loss) attributable to noncontrolling interests, net of tax” on our Consolidated Statements of Operations and Comprehensive Income (Loss).

“General and administrative expenses”

During the years ended December 31, 2016, 2015 and 2014, we incurred \$99 million, \$92 million and \$108 million, respectively, for general and administrative expenses from EchoStar. These amounts are recorded in “General and administrative expenses” on our Consolidated Statements of Operations and Comprehensive Income (Loss). The agreements pertaining to these expenses are discussed below.

DISH NETWORK CORPORATION
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Product Support Agreement. In connection with the Spin-off, we entered into a product support agreement pursuant to which we have the right, but not the obligation, to receive product support from EchoStar (including certain engineering and technical support services) for all set-top boxes and related accessories that EchoStar has previously sold and in the future may sell to us. The fees for the services provided under the product support agreement are calculated at cost plus a fixed margin, which varies depending on the nature of the services provided. The term of the product support agreement is the economic life of such receivers and related accessories, unless terminated earlier. We may terminate the product support agreement for any reason upon at least 60 days notice. In the event of an early termination of this agreement, we are entitled to a refund of any unearned fees paid to EchoStar for the services.

Real Estate Lease Agreements. We have entered into lease agreements pursuant to which we lease certain real estate from EchoStar. The rent on a per square foot basis for each of the leases is comparable to per square foot rental rates of similar commercial property in the same geographic area, and EchoStar is responsible for its portion of the taxes, insurance, utilities and maintenance of the premises. The term of each lease is set forth below:

- *Inverness Lease Agreement.* The lease for certain space at 90 Inverness Circle East in Englewood, Colorado was terminated effective August 10, 2016.
- *Meridian Lease Agreement.* The lease for all of 9601 S. Meridian Blvd. in Englewood, Colorado is for a period ending on December 31, 2016. In December 2016, we and EchoStar amended this lease to, among other things, extend the term thereof for one additional year until December 31, 2017.
- *Santa Fe Lease Agreement.* The lease for all of 5701 S. Santa Fe Dr. in Littleton, Colorado is for a period ending on December 31, 2016. In December 2016, we and EchoStar amended this lease to, among other things, extend the term thereof for one additional year until December 31, 2017.
- *EchoStar Data Networks Sublease Agreement.* The sublease for certain space at 211 Perimeter Center in Atlanta, Georgia expired on October 31, 2016.
- *Gilbert Lease Agreement.* Effective August 1, 2014, we began leasing certain space from EchoStar at 801 N. DISH Dr. in Gilbert, Arizona. This lease is for a period ending on July 31, 2017.
- *Cheyenne Lease Agreement.* The lease for certain space at 530 EchoStar Drive in Cheyenne, Wyoming is for a period ending on December 31, 2031.

Application Development Agreement. During the fourth quarter 2012, we and EchoStar entered into a set-top box application development agreement (the “Application Development Agreement”) pursuant to which EchoStar provides us with certain services relating to the development of web-based applications for set-top boxes for a period ending on February 1, 2017. The Application Development Agreement renews automatically for successive one-year periods thereafter, unless terminated earlier by us or EchoStar at any time upon at least 90 days notice. The fees for services provided under the Application Development Agreement are calculated at EchoStar’s cost of providing the relevant service plus a fixed margin, which will depend on the nature of the services provided.

XiP Encryption Agreement. During the third quarter 2012, we entered into an encryption agreement with EchoStar for our whole-home HD DVR line of set-top boxes (the “XiP Encryption Agreement”) pursuant to which EchoStar provides certain security measures on our whole-home HD DVR line of set-top boxes to encrypt the content delivered to the set-top box via a smart card and secure the content between set-top boxes. In November 2016, we and EchoStar extended the term of the XiP Encryption Agreement for one additional year until December 31, 2017. We and EchoStar each have the right to terminate the XiP Encryption Agreement for any reason upon at least 30 days notice and 180 days notice, respectively. The fees for the services provided under the XiP Encryption Agreement are calculated on a monthly basis based on the number of receivers utilizing such security measures each month.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Sling Trademark License Agreement. On December 31, 2014, Sling TV L.L.C. entered into an agreement with Sling Media, Inc., a subsidiary of EchoStar, pursuant to which we have the right for a fixed fee to use certain trademarks, domain names and other intellectual property related to the “Sling” trademark for a period ending on December 31, 2016. In December 2016, Sling TV L.L.C. and Sling Media, Inc. amended this agreement to, among other things, extend the term thereof on a month-to-month basis. Either party may terminate this agreement at any time upon 21 days prior written notice to the other party.

Professional Services Agreement. Prior to 2010, in connection with the Spin-off, we entered into various agreements with EchoStar including the Transition Services Agreement, Satellite Procurement Agreement and Services Agreement, which all expired on January 1, 2010 and were replaced by a Professional Services Agreement. During 2009, we and EchoStar agreed that EchoStar shall continue to have the right, but not the obligation, to receive the following services from us, among others, certain of which were previously provided under the Transition Services Agreement: information technology, travel and event coordination, internal audit, legal, accounting and tax, benefits administration, program acquisition services and other support services. Mr. Vivek Khemka, our Executive Vice President and Chief Technology Officer, currently also provides services pursuant to the Professional Services Agreement to EchoStar as the President of EchoStar Technologies L.L.C. Additionally, we and EchoStar agreed that we shall continue to have the right, but not the obligation, to engage EchoStar to manage the process of procuring new satellite capacity for us (previously provided under the Satellite Procurement Agreement) and receive logistics, procurement and quality assurance services from EchoStar (previously provided under the Services Agreement) and other support services. The Professional Services Agreement renewed on January 1, 2017 for an additional one-year period until January 1, 2018 and renews automatically for successive one-year periods thereafter, unless terminated earlier by either party upon at least 60 days notice. However, either party may terminate the Professional Services Agreement in part with respect to any particular service it receives for any reason upon at least 30 days notice. Revenue for services provided by us to EchoStar under the Professional Services Agreement is recorded in “Equipment sales and other revenue” on our Consolidated Statements of Operations and Comprehensive Income (Loss).

Other Agreements - EchoStar

Receiver Agreement. EchoStar is currently our primary supplier of set-top box receivers. Effective January 1, 2012, we and EchoStar entered into a receiver agreement (the “2012 Receiver Agreement”) pursuant to which we have the right, but not the obligation, to purchase digital set-top boxes, related accessories, and other equipment. In November 2016, we and EchoStar amended the 2012 Receiver Agreement to extend the term thereof for one additional year until December 31, 2017. The 2012 Receiver Agreement allows us to purchase digital set-top boxes, related accessories and other equipment from EchoStar either: (i) at a cost (decreasing as EchoStar reduces costs and increasing as costs increase) plus a dollar mark-up which will depend upon the cost of the product subject to a collar on EchoStar’s mark-up; or (ii) at cost plus a fixed margin, which will depend on the nature of the equipment purchased. Under the 2012 Receiver Agreement, EchoStar’s margins will be increased if they are able to reduce the costs of their digital set-top boxes and their margins will be reduced if these costs increase. EchoStar provides us with standard manufacturer warranties for the goods sold under the 2012 Receiver Agreement. Additionally, the 2012 Receiver Agreement includes an indemnification provision, whereby the parties indemnify each other for certain intellectual property matters. We are able to terminate the 2012 Receiver Agreement for any reason upon at least 60 days notice to EchoStar. EchoStar is able to terminate the 2012 Receiver Agreement if certain entities acquire us.

For the years ended December 31, 2016, 2015 and 2014, we purchased set-top boxes and other equipment from EchoStar of \$702 million, \$753 million and \$1.114 billion, respectively. Included in these amounts are purchases of certain broadband equipment from EchoStar under the 2012 Receiver Agreement. These amounts are initially included in “Inventory” and are subsequently capitalized as “Property and equipment, net” on our Consolidated Balance Sheets or expensed as “Subscriber acquisition costs” or “Subscriber-related expenses” on our Consolidated Statements of Operations and Comprehensive Income (Loss) when the equipment is deployed.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Tax Sharing Agreement. In connection with the Spin-off, we entered into a tax sharing agreement with EchoStar which governs our respective rights, responsibilities and obligations after the Spin-off with respect to taxes for the periods ending on or before the Spin-off. Generally, all pre-Spin-off taxes, including any taxes that are incurred as a result of restructuring activities undertaken to implement the Spin-off, are borne by us, and we will indemnify EchoStar for such taxes. However, we are not liable for and will not indemnify EchoStar for any taxes that are incurred as a result of the Spin-off or certain related transactions failing to qualify as tax-free distributions pursuant to any provision of Section 355 or Section 361 of the Internal Revenue Code of 1986, as amended (the “Code”) because of: (i) a direct or indirect acquisition of any of EchoStar’s stock, stock options or assets; (ii) any action that EchoStar takes or fails to take; or (iii) any action that EchoStar takes that is inconsistent with the information and representations furnished to the Internal Revenue Service (“IRS”) in connection with the request for the private letter ruling, or to counsel in connection with any opinion being delivered by counsel with respect to the Spin-off or certain related transactions. In such case, EchoStar is solely liable for, and will indemnify us for, any resulting taxes, as well as any losses, claims and expenses. The tax sharing agreement will only terminate after the later of the full period of all applicable statutes of limitations, including extensions, or once all rights and obligations are fully effectuated or performed.

In light of the tax sharing agreement, among other things, and in connection with our consolidated federal income tax returns for certain tax years prior to and for the year of the Spin-off, during the third quarter 2013, we and EchoStar agreed upon a supplemental allocation of the tax benefits arising from certain tax items resolved in the course of the IRS’ examination of these consolidated tax returns. As a result, we agreed to pay EchoStar \$83 million of the tax benefit we received or will receive. This resulted in a reduction of our recorded unrecognized tax benefits and this amount was reclassified to a long-term payable to EchoStar within “Long-term deferred revenue, distribution and carriage payments and other long-term liabilities” on our Consolidated Balance Sheets during the third quarter 2013. Any payment to EchoStar, including accrued interest, will be made at such time as EchoStar would have otherwise been able to realize such tax benefit. In addition, during the third quarter 2013, we and EchoStar agreed upon a tax sharing arrangement for filing certain combined state income tax returns and a method of allocating the respective tax liabilities between us and EchoStar for such combined returns, through the taxable period ending on December 31, 2017.

We and EchoStar file combined income tax returns in certain states. In 2015 and 2014, EchoStar earned and recognized a tax benefit for certain state income tax credits that EchoStar estimates it would be unable to utilize in the future if it had filed separately from us. In addition, EchoStar earned and recognized tax benefits for certain federal income tax credits, a portion of which were allocated to us under IRS rules for affiliated companies. We expect to utilize these tax credits to reduce our federal and state income tax payable in the future. In accordance with accounting rules that apply to transfers of assets between entities under common control, we recorded a capital contribution of less than \$1 million and \$3 million in “Additional paid-in capital” on our Consolidated Balance Sheets for the years ended December 31, 2016 and 2015, respectively, representing the amount that we estimate is more likely than not to be realized by us as a result of our utilization of these tax credits earned. Any payments made to EchoStar related to the utilization of these credits will be recorded as a reduction to “Additional paid-in capital” on our Consolidated Balance Sheets.

TiVo. On April 29, 2011, we and EchoStar entered into a settlement agreement with TiVo Inc. (“TiVo”). The settlement resolved all pending litigation between us and EchoStar, on the one hand, and TiVo, on the other hand, including litigation relating to alleged patent infringement involving certain DISH digital video recorders, or DVRs.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Under the settlement agreement, all pending litigation was dismissed with prejudice and all injunctions that permanently restrain, enjoin or compel any action by us or EchoStar were dissolved. We and EchoStar are jointly responsible for making payments to TiVo in the aggregate amount of \$500 million, including an initial payment of \$300 million and the remaining \$200 million in six equal annual installments between 2012 and 2017. Pursuant to the terms and conditions of the agreements entered into in connection with the Spin-off of EchoStar from us, we made the initial payment to TiVo in May 2011, except for the contribution from EchoStar totaling approximately \$10 million, representing an allocation of liability relating to EchoStar's sales of DVR-enabled receivers to an international customer. Future payments will be allocated between us and EchoStar based on historical sales of certain licensed products, with us being responsible for 95% of each annual payment.

Patent Cross-License Agreements. In December 2011, we and EchoStar entered into separate patent cross-license agreements with the same third party whereby: (i) EchoStar and such third-party licensed their respective patents to each other subject to certain conditions; and (ii) we and such third-party licensed our respective patents to each other subject to certain conditions (each, a "Cross-License Agreement"). Each Cross License Agreement covers patents acquired by the respective party prior to January 1, 2017 and aggregate payments under both Cross-License Agreements total less than \$10 million. Each Cross License Agreement also contains an option to extend each Cross-License Agreement to include patents acquired by the respective party prior to January 1, 2022. In December 2016, we and EchoStar independently exercised our respective options to extend each Cross-License Agreement. The aggregate additional payments to such third-party was less than \$3 million. Since the aggregate payments under both Cross-License Agreements were based on the combined annual revenues of us and EchoStar, we and EchoStar agreed to allocate our respective payments to such third party based on our respective percentage of combined total revenue.

Amended and Restated T2 Development Agreement. On August 29, 2013, we and EchoStar entered into a development agreement (the "T2 Development Agreement") with respect to the T2 satellite, by which EchoStar reimbursed us for amounts we paid pursuant to an authorization to proceed (the "T2 ATP") with SS/L related to the T2 satellite construction contract. In exchange, we granted EchoStar a right of first refusal and right of first offer to purchase our rights in T2 during the term of the T2 Development Agreement.

During the fourth quarter 2013, we and EchoStar amended and restated the T2 Development Agreement (the "Amended and Restated T2 Development Agreement"), which superseded and replaced the T2 Development Agreement. Under the Amended and Restated T2 Development Agreement, EchoStar reimbursed us for amounts we paid pursuant to the T2 ATP with SS/L. During the years ended December 31, 2014 and 2013, we received payments from EchoStar of approximately \$13 million and \$35 million, respectively, under the Amended and Restated T2 Development Agreement to reimburse us for amounts paid to SS/L. In exchange, we granted EchoStar the right and option to purchase our rights in the T2 satellite for the sum of \$55 million, exercisable at any time during the term of the Amended and Restated T2 Development Agreement. During the fourth quarter 2014, EchoStar purchased our rights to the T2 satellite for \$55 million. In accordance with accounting principles that apply to transfers of assets between companies under common control, we recorded the difference between our historical cost basis of the satellite and the fair value of the satellite transferred to EchoStar as a \$9 million, net of deferred taxes, capital contribution in "Additional paid-in capital" on our Consolidated Balance Sheets.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Satellite and Tracking Stock Transaction with EchoStar. On February 20, 2014, we entered into the Satellite and Tracking Stock Transaction with EchoStar pursuant to which, among other things: (i) on March 1, 2014, we transferred to EchoStar and HSSC the Transferred Satellites, including related in-orbit incentive obligations and cash interest payments of approximately \$59 million and approximately \$11 million in cash in exchange for the Tracking Stock; and (ii) beginning on March 1, 2014, we lease back all available satellite capacity on the Transferred Satellites. The Satellite and Tracking Stock Transaction is further described below:

- *Transaction Agreement.* On February 20, 2014, DOLLC, DNLLC and EchoStar XI Holding L.L.C., all indirect wholly-owned subsidiaries of us, entered into the Transaction Agreement with EchoStar, HSSC and Alpha Company LLC, a wholly-owned subsidiary of EchoStar, pursuant to which, on March 1, 2014, we, among other things, transferred to EchoStar and HSSC the Transferred Satellites in exchange for the Tracking Stock. The Tracking Stock generally tracks the Hughes Retail Group. The shares of the Tracking Stock issued to us represent an aggregate 80% economic interest in the Hughes Retail Group. Since the Satellite and Tracking Stock Transaction is among entities under common control, we recorded the Tracking Stock at EchoStar's and HSSC's historical cost basis for these instruments of \$229 million and \$87 million, respectively. The difference between the historical cost basis of the Tracking Stock received and the net carrying value of the Transferred Satellites of \$356 million (including debt obligations, net of deferred taxes), plus the \$11 million in cash, resulted in a \$51 million capital transaction recorded in "Additional paid-in capital" on our Consolidated Balance Sheets. Although our investment in the Tracking Stock represents an aggregate 80% economic interest in the Hughes Retail Group, we have no operational control or significant influence over the Hughes Retail Group business, and currently there is no public market for the Tracking Stock. As such, the Tracking Stock is accounted for under the cost method of accounting. The Transaction Agreement includes, among other things, customary mutual provisions for representations, warranties and indemnification.
- *Satellite Capacity Leased from EchoStar.* On February 20, 2014, we entered into satellite capacity agreements with certain subsidiaries of EchoStar pursuant to which, beginning March 1, 2014, we, among other things, lease all available satellite capacity on the Transferred Satellites. The satellite capacity agreement for EchoStar I expired on November 30, 2015. See further information under "Satellite and transmission expenses – Satellite Capacity Leased from EchoStar."
- *Investor Rights Agreement.* On February 20, 2014, EchoStar, HSSC, DOLLC and DNLLC (DOLLC and DNLLC, collectively referred to as the "DISH Investors") also entered into the Investor Rights Agreement with respect to the Tracking Stock. The Investor Rights Agreement provides, among other things, certain information and consultation rights for the DISH Investors; certain transfer restrictions on the Tracking Stock and certain rights and obligations to offer and sell under certain circumstances (including a prohibition on transfers of the Tracking Stock for one year, with continuing transfer restrictions (including a right of first offer in favor of EchoStar) thereafter, an obligation to sell the Tracking Stock to EchoStar in connection with a change of control of us and a right to require EchoStar to repurchase the Tracking Stock in connection with a change of control of EchoStar, in each case subject to certain terms and conditions); certain registration rights; certain obligations to provide conversion and exchange rights of the Tracking Stock under certain circumstances; and certain protective covenants afforded to holders of the Tracking Stock. The Investor Rights Agreement generally will terminate as to the DISH Investors at such time as the DISH Investors no longer hold any shares of the HSSC-issued Tracking Stock and any registrable securities under the Investor Rights Agreement.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

PMC. During 2008, Personalized Media Communications, Inc. (“PMC”) filed suit against us; EchoStar and Motorola Inc., in the United States District Court for the Eastern District of Texas, alleging infringement of United States Patent Nos. 5,109,414; 4,965,825; 5,233,654; 5,335,277 and 5,887,243, which relate to satellite signal processing. On May 7, 2015, we, EchoStar and PMC entered into a settlement and release agreement that provided, among other things, for a license by PMC to us and EchoStar for certain patents and patent applications and the dismissal of all of PMC’s claims in the action against us and EchoStar with prejudice. On June 4, 2015, the Court dismissed all of PMC’s claims in the action against us and EchoStar with prejudice. In June 2015, we and EchoStar agreed that EchoStar would contribute a one-time payment of \$5 million towards the settlement under the agreements entered into in connection with the Spin-off and the 2012 Receiver Agreement.

gTLD Bidding Agreement. In April 2015, we and EchoStar entered into a gTLD Bidding Agreement whereby, among other things: (i) we obtained rights from EchoStar to participate in a generic top level domain (“gTLD”) auction, assuming all rights and obligations from EchoStar related to EchoStar’s application with ICANN for a particular gTLD; (ii) we agreed to reimburse EchoStar for its ICANN application fee and certain out-of-pocket expenses related to the application and the auction; and (iii) we and EchoStar agreed to split equally the net proceeds obtained by us as the losing bidder in the auction, less such fee reimbursement and out-of-pocket expenses. During the year ended December 31, 2015, we paid EchoStar approximately \$1 million related to this agreement.

Rovi License Agreement. On August 19, 2016, we entered into a ten-year patent license agreement (the “Rovi License Agreement”) with Rovi Corporation (“Rovi”) and, for certain limited purposes, EchoStar. EchoStar is a party to the Rovi License Agreement solely with respect to certain provisions relating to the prior patent license agreement between EchoStar and Rovi. There are no payments between us and EchoStar under the Rovi License Agreement.

Sale of Orange, New Jersey Properties. In October 2016, we and EchoStar sold two parcels of real estate owned separately by us and EchoStar in Orange, New Jersey to a third party pursuant to a purchase and sale agreement. Pursuant to the agreement, we and EchoStar separately received our respective payments from the buyer.

Invidi. In November 2010 and April 2011, EchoStar made investments in Invidi Technologies Corporation (“Invidi”) in exchange for shares of Invidi’s Series D Preferred Stock. In November 2016, we, DIRECTV, LLC, a wholly-owned indirect subsidiary of AT&T Inc., and Cavendish Square Holding B.V., an affiliate of WPP plc, entered into a series of agreements to acquire Invidi. As a result of the transaction, EchoStar sold its ownership interest in Invidi on the same terms offered to the other shareholders of Invidi. The transaction closed in January 2017.

Other

In November 2009, Mr. Roger Lynch became employed by both us and EchoStar as an Executive Vice President. Mr. Lynch was responsible for the development and implementation of advanced technologies that are of potential utility and importance to both DISH Network and EchoStar. Mr. Lynch’s compensation consisted of cash and equity compensation and was borne by both EchoStar and DISH Network. As of January 1, 2015, Mr. Lynch is solely a DISH Network employee as Sling TV’s Chief Executive Officer and DISH Network’s Executive Vice President, Advanced Technologies.

DISH NETWORK CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Related Party Transactions with NagraStar L.L.C.

NagraStar is a joint venture between EchoStar and Nagra USA, Inc. that is our provider of encryption and related security systems intended to assure that only authorized customers have access to our programming. These expenses are recorded in “Subscriber-related expenses” on our Consolidated Statements of Operations and Comprehensive Income (Loss). We record all payables in “Trade accounts payable” or “Other accrued expenses” on our Consolidated Balance Sheets.

The table below summarizes our transactions with NagraStar.

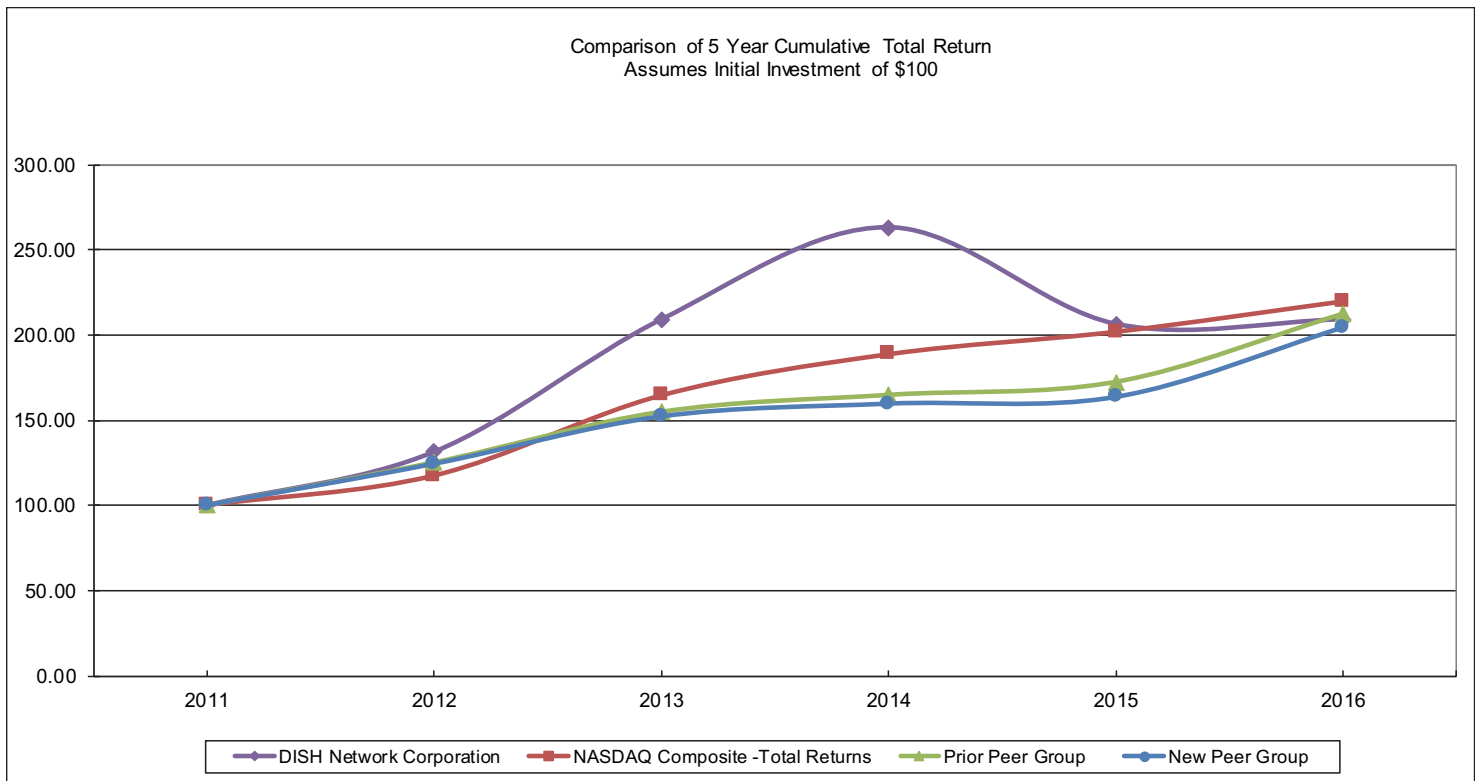
	For the Years Ended December 31,		
	2016	2015	2014
	(In thousands)		
Purchases (including fees):			
Purchases from NagraStar	\$ 72,529	\$ 89,195	\$ 84,636
	As of December 31,		
	2016	2015	
	(In thousands)		
Amounts Payable and Commitments:			
Amounts payable to NagraStar	\$ 17,055	\$ 19,362	
Commitments to NagraStar	\$ 51	\$ 1,532	

COMPARATIVE PERFORMANCE

The graph below sets forth the cumulative total return to our shareholders during the period from December 31, 2011 to December 31, 2016. The graph assumes the investment on December 31, 2011 of \$100 in (i) our Class A Shares, (ii) an industry peer group and (iii) the NASDAQ Composite Index and reflects reinvestment of dividends and market capitalization weighting. Although the companies included in the industry peer group were selected because of similar industry characteristics, they are not entirely representative of our business.

We have included an industry peer group (the “New Peer Group”) comprised of: AT&T Inc., Charter Communications, Inc., Comcast Corporation, DISH Network Corporation, and Verizon Communications Inc. Although the companies included in the industry peer group were selected because of similar industry characteristics, they are not entirely representative of our business.

The New Peer Group was created as a result of merger and acquisition activity that impacted our prior peer group (the “Prior Peer Group”), which had consisted of our common stock as well as AT&T Inc., Cablevision Systems Corporation (included through June 21, 2016, the date of acquisition by Altice NV), Comcast Corporation, DirecTV Inc. (included through July 24, 2015, the date of acquisition by AT&T Inc.), Time Warner Cable Inc. (included through May 18, 2016, the date of acquisition by Charter Communications, Inc.), and Verizon Communications Inc.



Total Return Analysis	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016
DISH Network Corporation	\$ 100.00	\$ 131.29	\$ 208.92	\$ 262.91	\$ 206.25	\$ 208.95
NASDAQ Composite – Total Returns	\$ 100.00	\$ 117.45	\$ 164.57	\$ 188.84	\$ 201.98	\$ 219.89
New Peer Group	\$ 100.00	\$ 124.26	\$ 152.07	\$ 159.55	\$ 163.52	\$ 204.27
Prior Peer Group	\$ 100.00	\$ 125.05	\$ 154.65	\$ 164.57	\$ 172.18	\$ 212.09

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Corporate Profile

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George R. Brokaw
Director

James DeFranco
Director

Cantey M. Ergen
Director

Steven R. Goodbarn
Director

Charles M. Lillis
Director

Afshin Mohebbi
Director

David K. Moskowitz
Director

Tom A. Ortolf
Director

Carl E. Vogel
Director

Transfer Agent

Computershare Trust Company
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Indenture Trustees

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Corporate Trust Administration
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St. Paul, MN 55107
Attn: Richard H. Prokosch

Wells Fargo Bank
National Association
Corporate Trust Services
150 East 42nd St., 40th Floor
New York, NY 10017
Attn: Raymond Delli Colli

Executive Officers

Charles W. Ergen
*Chairman &
Chief Executive Officer*

W. Erik Carlson
President & Chief Operating Officer

Thomas A. Cullen
*Executive Vice President,
Corporate Development*

James DeFranco
Executive Vice President

R. Stanton Dodge
*Executive Vice President,
General Counsel & Secretary*

Bernard L. Han
*Executive Vice President,
Strategic Planning*

Vivek Khemka
*Executive Vice President &
Chief Technology Officer and
President, DISH Technologies*

Roger J. Lynch
*Executive Vice President,
Advanced Technologies and
CEO, Sling TV*

Michael K. McClaskey
*Executive Vice President &
Chief Human Resources Officer*

Brian V. Neylon
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Customer Acquisition & Retention*

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*Executive Vice President,
Marketing, Programming &
Media Sales*

Steven E. Swain
Chief Financial Officer

John W. Swieringa
*Executive Vice President,
Operations*

Annual Meeting

The 2017 Annual Meeting of Shareholders will be held on May 1, 2017.

Shareholder Information

Investor Relations Department
DISH Network Corporation
9601 S. Meridian Blvd.
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For more information, please visit the investor relations section of our website at dish.com.



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